

CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY

L'INSTITUT CANADIEN DU DROIT ET DE LA POLITIQUE DE L'ENVIRONNEMENT

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INSTITUTIONAL HIGHLIGHTS

- 1970** The Institute is founded under the name of the Canadian Environmental Law Research Foundation (CELRF), the research foundation for the Canadian Environmental Law Association (CELA).
- 1972** CIELAP begins publishing the Canadian Environmental Law Reports (CELR). Today, the CELR remain the definitive environmental law reporter in Canada. Published monthly in association with Carswell Publishers, the CELR enjoy a growing global distribution.
- 1974** The first edition of Environment on Trial (EOT) is published by New Press in association with CELRF and CELA. Today, published in its third edition by CIELAP and Emond Montgomery Publications, EOT is used as a textbook in University classrooms as well as a key resource by lawyers and others.
- 1978** CELRF and CELA divide into two organizations. Today, these two organizations share a professionally staffed library which houses an outstanding collection of environmental law and policy research and education materials.
- 1984** CIELAP begins its active role in the biotechnology debate. Successes include significant research policy documents and media coverage which augment public awareness of the economic, social, human and environmental health impacts of biotechnology.
- 1989** The Program for Zero Discharge marks the beginning of a three year research and education program designed to eliminate persistent toxic substances from the Great Lakes. The project's conclusions aid in setting the policy agendas regarding persistent toxic substances at both the federal and provincial levels of government.
- 1992** CIELAP works in partnership with two other organizations from Mexico and the United States to host a tri-partite conference. The objective is to bring environmental non-governmental organizations in the three countries together to meet the challenge of protecting their common resources. This was accomplished by educating participants on each country's environmental legislation and how to co-operatively problem-solve.
- 1994** CIELAP hosts an educational conference on the Environmental Bill of Rights (EBR) at the University of Toronto. This conference is part of CIELAP's long-term goal of creating an EBR for Ontario to ensure maximum citizen participation in achieving a quality environment.

CIELAP assists in establishing an environmental legal aid clinic in Costa Rica in partnership with another environmental law organization, Fundación Ambio.

- 1995** CIELAP celebrates its 25 Anniversary as a leader in environmental law and policy research and education.

The Citizen's Guide entitled, The Citizen's Guide to Biotechnology, is published by CIELAP.

- 1996** CIELAP develops its own World Wide Web site which includes the Institute's publications, news releases and more (<http://www.web.net/cielap>).

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Comments on Pollution Prevention Strategic Framework For Canada: Draft Discussion Paper

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I. Introduction

The Canadian Institute for Environmental Law and Policy (CIELAP) was pleased to be invited to comment on Environment Canada and Industry Science and Technology Canada's draft Pollution Prevention Strategic Framework for Canada. The draft Strategic Framework introduces a number of important linkages between environmental and industrial policy. Central to such connections is the shift from a react and cure approach to environmental protection to one which anticipates and prevents environmental problems. Such a transition has been advocated by the environmental community in Canada, including CIELAP and its predecessor, the Canadian Environmental Law Research Foundation (CELRF) for over a decade.¹

The draft Strategic Framework also recognizes the ongoing movement in the debate regarding the relationship between environmental protection and economic well-being. The traditional characterization of this relationship, which has seen environmental protection and economic performance as competing goals in a zero-sum game,² is giving way to a more complex understanding of the environment-economy linkage. Recent analyses which point to the significance of the avoided environmental costs to present and future generations produced by environmental protection measures are particularly important in this sense.³

In a more immediate context, in recent years, increased environmental protection standards have been widely recognized as leading to economic opportunities in the field of environmental protection services and technologies. In many cases, products and services developed in response to new domestic requirements have been found to have considerable export potential as well. Furthermore, the argument that strict environmental standards may

actually directly enhance the long-term economic positions of the affected firms has received growing attention. The contention that environmental regulation might initiate innovation and efficiency in industrial processes is being articulated with increasing frequency.⁴

The draft Strategic Framework notes that Canadian governments and industry have been slow to recognize these possibilities in comparison with some European jurisdictions and U.S. states. A number of these jurisdictions began to integrate industrial and environmental policy through programs to promote process changes to facilitate waste reduction, pollution prevention and energy efficiency as early as the late 1970s.⁵ Canadian governments and industry have only begun to act in a significant way on similar connections over the past three years.⁶

II. Definitions

The draft Strategic Framework presents a widely accepted and appropriate definition of pollution prevention (p.13). The draft Strategic Framework also lists a range of unresolved issues regarding the definition of pollution prevention. A multi-media or cross-media approach should be stressed in the framework. The failures of single-media approaches to pollution control have been widely documented, and indicate the need to address the environmental effects of pollutants throughout the environment.⁷ In addition, given their environmental effects, an emphasis on persistent toxic substances would seem appropriate. This would be consistent with the goal of their "virtual elimination" articulated through the Great Lakes Water Quality Agreement of 1978.

The question of whether pollution prevention ought to focus on the creation of pollutants as opposed to their release has been a matter of growing controversy.⁸ It would seem that, in many cases, the prevention of the creation of persistent toxics may be necessary to ensure their virtual elimination. However, such a strategy should recognize its implications in terms of the long-term capital investments of the affected industries and therefore allow for reasonable time frames for its implementation.

It is generally held that recycling should not be included as part of the definition of pollution prevention. This is due to the consideration that recycling programs take the generation of waste products as a given, and attempt to deal with them once they have been created. This is inconsistent with a pollution prevention approach, in the sense that pollution prevention emphasizes the reduction of the amount of waste generated. However, in-plant process changes which involve material recycling might be considered part of a pollution prevention program.

III. Guiding Principles

The emphasis placed by the draft Strategic Framework on the consideration of pollution prevention throughout the production, use and disposal cycles is critically important. The focus on the planning and design stages is especially significant, as pollution prevention considerations must be taken into account at this stage to maximize their effectiveness and efficiency.

The guiding principles also refer to product stewardship, life-cycle management, polluter pays and full cost/pricing accounting, but fails to define these concepts in any way. Each of these elements is a significant principle in its own right, and their importance and scope deserves more detailed attention than is provided in the Strategic Framework document.

The guiding principles for pollution prevention structure should be placed in a wider macro-level context. This would link pollution prevention efforts to the maintenance of environmental integrity and to environmentally sustainable patterns of resource use. This would strengthen and clarify the connection between pollution prevention and environmental and economic sustainability.

IV. Pillars for Action

The draft Strategic Framework places significant emphasis on "non-prescriptive, voluntary," approaches to pollution prevention. There is a need to distinguish between these two components of the approach. With reference to "non-prescriptive" approaches, this would seem to involve a shift from so-called "design" standards in environmental regulation to "performance" standards. The latter establish a level of performance required of a firm in terms of its environmental emissions, but does not prescribe the technology to be used to achieve those requirements. The need for such a shift in approach is becoming increasingly widely accepted,⁹ although its precise implications in terms of regulatory design, implementation and enforcement are still unclear.

With respect to the question of voluntarism, it is important to keep in mind that firms have very strong short-term incentives to externalize production costs in the form of pollution. Indeed, this consideration has been central to the need for government action to address environmental degradation, as well as damage to other public goods. This suggests that regulatory measures will continue to be required to bring about the internalization of environmental costs.

Furthermore, in the short-term, firms which voluntarily take steps to internalize the environmental costs of their activities may place themselves at a competitive disadvantage in relation to

others who do not. This "free-rider" problem indicates a need for regulatory action to level the playing field. This has recently been evident in the field of municipal solid waste. Firms which have partially internalized the post-consumer management costs of their packaging and products in the form of voluntary support to municipal recycling programs, through such organizations as Ontario Multi Materials Recycling Inc. (OMMRI), have begun to request regulatory measures by governments to require others who do not participate in such systems to do so.¹⁰

V. The Role of Governments

1) Instrument Choice and Policy Approach to Environmental Protection

The draft Strategic Framework places a great deal of emphasis on the importance of the harmonization of standards among Canadian governments. Greater attention should be given to the point that this harmonization must occur in an upwards direction. There is a tendency in harmonization efforts to move towards the lowest common denominator in terms of standards. Such an outcome would not be acceptable from CIELAP's viewpoint.

In addition, the desire for harmonization should not lead to situations where all governments must agree on a course of action before action can be taken. Experience in a number of fields suggests that once one government begins to move others are likely to follow its lead and model. This has been especially true if the lead jurisdiction is the federal government or one of the larger provinces.

The draft Strategic Framework presents a number of criticisms of traditional regulatory approaches to environmental protection. Examples of the problems attributed to these approaches should be provided. Furthermore, it is apparent that many of the criticisms presented could be dealt with through modifications to existing regulatory systems. This might include shifts to cross-media models of regulation, and the development of effective models for the application of performance standards on a sectoral or global basis.

The document notes with some favour the more "accommodative" approach to environmental regulation employed by environmental regulators in most of Western Europe, as opposed to the "prosecutorial" approach taken by U.S. regulators.¹¹ It should be kept in mind that Canadian environment regulators have traditionally taken an "accommodative" approach to the enforcement of environmental protection requirements, and that the results have been widely regarded as a major policy failure.¹²

There are important cultural differences between Western Europe and North America which have affected the success of the

"accommodative" approach to environmental protection in Europe. The degree of respect for state authorities among business leaders in Europe is frequently cited as being particularly noteworthy in this sense.¹³ Canadian and American industries are generally seen as being less willing than their European counterparts to accept as legitimate interventions by the state to regulate the external effects of their activities.

The draft Strategic Framework gives considerable attention to the use of economic instruments in environmental policy. It should be remembered that the advantages attributed to economic instruments on pg. 33 of the document are, at this stage, of a potential or theoretical nature, as operational experience with economic instruments in the environmental field is still very limited. In addition, it should be kept in mind that, as the draft Strategic Framework notes, economic instruments, unlike their regulatory counterparts, cannot ensure environmental protection. This is an especially important consideration when dealing with hazardous pollutants. However, economic instruments may have a significant role as supplements to a regulatory system.

The draft Strategic Framework's discussion of economic instruments focuses to a considerable degree on emission trading systems. It is important to note that there are a number of well-developed criticisms of trading systems. They have been strongly criticized as creating proprietary rights to pollute.¹⁴ In addition to this objection in principle, trading systems suffer from a number of serious practical problems, including their administrative complexity, and their potential to generate local degradations of environmental quality.¹⁵ For these reasons, proposals for trading systems should be approached with great caution.

Furthermore, the draft Strategic Framework should give some consideration to the wider range of economic instruments which have been proposed in Canada or employed in other jurisdictions. These include the proposals made by the Environment and Taxation working group of the Ontario Fair Tax Commission,¹⁶ and the hazardous waste charges and environmental taxes employed by some European jurisdictions.¹⁷

In general terms, Canadians will need to employ a mix of regulatory, economic and suasive measures to achieve their environmental policy goals. The usefulness of these instruments should not be assessed on the basis of their ideological category (market or non-market). Rather, they should be viewed in terms of the degree to which they will be effective in achieving the stated goals of environmental policy, their ability to make the most efficient use of scarce public and private resources, and the fairness of the distribution of costs and benefits in society which they will produce.

2) The Role of Environmental Technologies and the Environmental Industries Services Sector

The Draft Strategic Framework gives considerable attention to the role of environmental technologies in the implementation of a pollution prevention strategy. The document notes that some European nations and U.S. states have begun to make significant linkages between their environmental and industrial policies. The pursuit of process changes to prevent pollution, reduce waste and use energy more efficiently appear to be central to their approaches.¹⁸ A more detailed examination and discussion of the environmental/industrial policy approaches of these jurisdictions would have been an appropriate component of the strategic framework document as, in some cases, they have been pursuing strategies of this nature for more than a decade.

The current thinking of Canadian governments regarding environmental technologies and the environmental services industry sector is at a preliminary stage. Sectoral strategies and research and development support programs have only begun to appear in a significant manner in the last two years.¹⁹ Furthermore, many of these programs are focussed on the broad category of "environmental technologies" and therefore do not articulate a strategic role for such technologies or the environmental industry sector in the restructuring of the Canadian economy for environmental and economic sustainability.

In this context, a much greater emphasis should be placed on the development of technologies and services which facilitate pollution prevention, waste reduction and energy efficiency would appear to be appropriate. In addition, greater consideration might be given to the role which the environmental service sector can play in the delivery of such technologies to small- and medium-sized firms with limited capital resources and modest research and development capacities. The existing structure of Canadian environmental technologies programs has also been criticized for their failure to provide for the commercialization and dissemination of new technologies adequately.²⁰

VI. Conclusions

The Canadian environmental community, including the Canadian Institute for Environmental Law and Policy and its predecessor, the Canadian Environmental Law Research Foundation, has argued for more than a decade for a shift in environmental protection policy from a pollution control approach to one which emphasizes pollution prevention. The draft Pollution Prevention Strategic Framework for Canada indicates that the government of Canada has recognized this need, and is beginning to take steps to implement such a shift. The recognition of the linkages between environmental and industrial policy implied by such a move are particularly important, and we

are therefore pleased to see both Environment Canada and Industry, Science and Technology Canada involved in this effort.

The draft Strategic Framework document provides a starting point for an exploration of the implications for the shift from a focus on "end of pipe" approaches to environmental protection to one which stresses process changes. However, much more detailed explorations of the mix of regulatory and other measures necessary to bring about this shift, and the role of environmental technologies and the environmental services sector in its facilitation, need to be developed. Furthermore, these elements need to be placed more firmly in a wider macro-level context of sustainable development.

For its part, the CIELAP intends to follow-up the work of its 1989-1992 Program for Zero Discharge²¹ with detailed investigations of the means by which environmental and industrial policy can be linked more effectively. This will include the examination of the regulatory implications of the adoption of a pollution prevention approach to environmental protection, and an assessment of the potential role environmental technologies and services in the restructuring of the Canadian economy for environmental and economic sustainability.

ENDNOTES

1. See for example, M. Campbell and W. Glenn, Profit from Pollution Prevention (Toronto: Pollution Probe Foundation, 1982) and V. Adamson, Breaking the Barriers: A Study of Legislative and Economic Barriers to Industrial Waste Reduction and Recycling (Toronto: Canadian Environmental Law Research Foundation and the Pollution Probe Foundation, 1984).

2. For a discussion of this traditional view see A.R. Tussing, "Environmental Policy Issues: Market Failure in the Third Phase of Economic Activity," in G.B. Doern, ed, The Environmental Imperative: Market Approaches to the Greening of Canada, (Toronto: C.D. Howe Institute, 1990), pp. 52-77.

3. For detailed discussions of this matter see, for example, R. Repetto Wasting Assets: Natural Resources in National Income Accounts (Washington D.C: World Resources Institute, 1989) and H. Daly and J. Cobb, Jr., For the Common Good: Redirecting the Economy Toward Community, the Environment and a Sustainable Future (Boston: Beacon Press, 1989), esp. Parts I and II.

4. This view was first articulated in North America in the late 1970s. See, for example, M.G. Royston, Pollution Prevention Pays, (Elmsford, N.Y.: Pergamon Press, 1979), and W. Glenn and M. Campbell, Profit From Pollution Prevention, (Toronto: Pollution Probe Foundation, 1982). More recently see D. Huisingh, L. Martin, Helaine Leiger, and N. Seldman, Proven Profits from Pollution Prevention, (Washington D.C.: The Institute for Local Self-Reliance, 1985); K.U. Oldenburg and Joel S. Hirschhorn, "Waste Reduction: A New Strategy to Avoid Pollution," Environment, March 1987, pp. 16-45; D. Huisingh, "Cleaner technologies through process modifications, material substitutions and ecologically based ethical values," Industry and Environment, UNEP 12(1) Jan/Feb/March 1989, pp. 4-8; M. Porter, The Competitive Advantage of Nations, (New York: The Free Press, 1991), p. 585; M. Porter and the Monitor Company, Canada at the Crossroads: The Reality of a New Competitive Environment, (Ottawa: Business Council on National Issues and Minister of Supply and Services, 1991), pp. 244-250; and S. M. Meyer, Environmentalism and Economic Prosperity: Testing the Environmental Impact Hypothesis, (Cambridge, Mass.: Department of Political Science, Massachusetts Institute of Technology, October 1992).

5. On U.S. states see, for example, P. Muldoon, "Toward a National Pollution Prevention Strategy: Principles for Reform to Address the Problem of Toxic Contamination of the Canadian Environment," in Sustainable Development in Canada: Options for Law Reform, (Ottawa: Canadian Bar Association, 1990), pp. 130-152. On Europe see, for example, G. Monroe, "Where is industrial waste reduction taking

us?" Probe Post, August 1986, pp. 14-19; A.C. Williams, "A study of Waste minimization in Europe: public and private strategies to reduce the production of hazardous waste," Boston College Environmental Affairs Law Review, (1987); B.W. Piasacki and G. Davis, America's Future in Toxic Waste Management: Lessons from Europe, (New York: Quorum Books, 1987); Claudine Schneider "Hazardous Waste: the Bottom Line is Prevention," Issues in Science and Technology, 4, 4 (Summer 1988); K. Geiser, "The Greening of Industry. Making the Transition to a Sustainable Economy," Technology Review, August/September 1991; M. Renner, Jobs in a Sustainable Economy, (Washington, D.C.: The Worldwatch Institute, 1991); and European Economic Commission, Industrial Competitiveness and Protection of the Environment: Communication of the Commission to the Council and to the European Parliament, (Brussels: European Economic Commission, undated).

6. See M. Winfield and H. Sawai, Environmental Technology Support Programs in Canada: A Survey (Toronto: Canadian Institute for Environmental Law and Policy, forthcoming 1993).

7. For a discussion of this problem see, for example, D.P. Emond, "Environmental Law and Policy: A Retrospective Examination of the Canadian Experience," in I. Bernier and A. Lajoie, Consumer Protection, Environmental Law and Corporate Power (Toronto: University of Toronto Press, 1985).

8. See Virtual Elimination Task Force, Draft Final Report and Background Reports (Windsor/Detroit: International Joint Commission, 1993)

9. "More effective and efficient environmental policies," in Environment and Economics, (Paris: Organization for Economic Cooperation and Development, 1985), p. 171.

10. GPMC Packaging Stewardship Model: Discussion Document (Toronto: Grocery Products Manufacturer's of Canada, 1992).

11. For a general discussion of the concepts of "accommodative" and "prosecutorial approaches to environmental law enforcement see, for example: R. Brickman, S. Jasanoff and T. Ilgen, Controlling Chemicals: The Politics of Regulation in Europe and the United States, (Ithaca: Cornell University Press, 1985); D. Vogel, National Styles of Regulation: Environmental Policy in Great Britain and the United States, (Ithaca: Cornell University Press, 1986); L. Lundqvist, The Hare and the Tortoise, (Ann Arbor: University of Michigan Press, 1980); and R. Williams, Government Regulation of the Occupational and General Environments in the United Kingdom, the United States and Sweden, (Ottawa: Supply and Services Canada (Science Council of Canada Background Study) 1977).

12. See for example, D. Macdonald, The Politics of Pollution: Why Canadians are Failing their Environment (Toronto: McClelland and Stewart, 1991), and M. Winfield, The Ultimate Horizontal Issue: Environmental Politics in Ontario and Alberta 1971-1992 (Toronto: Ph.D. Thesis, Department of Political Science, University of Toronto, 1992).

13. Vogel, National Styles of Regulation.

14. B. Commoner, Making Peace With the Planet (New York: The New Press, 1992), p. 188.

15. See B. Heidenreich and M. Winfield, "Sustainable Development, Public Policy and the Law," in J. Swaigen, ed., Environment on Trial: A Guide to Ontario Environmental Law and Policy (Toronto: Emond-Montgomery Publishers and the Canadian Institute for Environmental Law and Policy, forthcoming) for a general discussion of these problems.

16. Environment and Taxation Working Group, Final Report (Toronto: Ontario Fair Tax Commission, 1992), esp. ch 3.

17. See The Use of Economic Instruments in Nordic Environmental Policy, (Copenhagen: Nordic Council of Ministers, 1991).

18. See note 4.

19. Winfield, Environmental Technology Support Programs in Canada.

20. See, for example, P. Jessop, ed., Degrees of Change: Steps Towards an Ontario Global Warming Strategy - Final Report (Toronto: Ontario Global Warming Coalition, 1991), esp. ch. 7.

21. See A Prescription for a Healthy Great Lakes: Report of the Program for Zero Discharge (Toronto and Ann Arbor: Canadian Institute for Environmental Law and Policy and the National Wildlife Federation, 1991).

