Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement

517 College Street, Suite 401, Toronto, Ontario M6G 4A2
Telephone (416) 960-2284
Fax (416) 960-9392

IT'S STILL ABOUT OUR HEALTH!

A Submission on

CEPA Review: The Government Response
Environmental Protection Legislation Designed for the Future - A Renewed CEPA - A Proposal

by

The Canadian Environmental Law Association

CELA Brief No. 283

and

The Canadian Institute for Environmental Law and Policy

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APPENDICES

BOOKSHELVES: ENVIRONMENTAL LAW - CEPA REFORM
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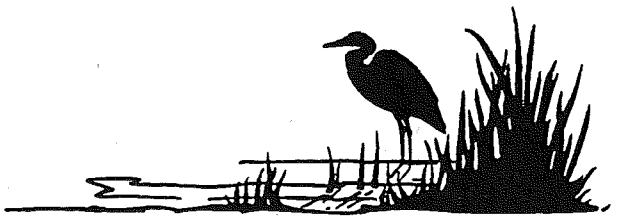
517 College Street, Suite 400, Toronto, Ontario M6G 4A2 (416) 923-3529 FAX (416) 923-5949

Appendix A

Reforming the Canadian Environmental Protection Act

A Submission to the Standing Committee on Environment and Sustainable Development

Reforming the *Canadian Environmental Protection Act*



A Submission to the Standing Committee on
Environment and Sustainable Development

Coordinated by the Toxics Caucus of the Canadian Environmental Network
September 1994

Edited by Burkhard Mausberg, Paul Muldoon and Mark Winfield

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Introduction

The *Canadian Environmental Protection Act* (CEPA) is Canada's most important environmental law. Since its inception, environmental groups from across Canada have had major concerns about the Act's effectiveness, the scope of its application, and its implementation.

In mid-1994, members of the Toxics Caucus of the Canadian Environmental Network (CEN) decided to study CEPA in anticipation of the Parliamentary Review. This report outlines 13 priority issues within CEPA as identified by members of the Caucus. Each issue is indexed for easy reference, and a summary of a detailed analysis prepared by a member of the CEN Toxics Caucus is provided. The recommendations are, however, the views of their authors and do imply endorsement by the CEN.

We welcome the opportunity to present our views on CEPA to the Standing Committee on Environment and Sustainable Development, and how the Act might be changed to improve the health of Canadians and their environment.

The review of CEPA provides the federal government with an opportunity to demonstrate its commitment to the protection of Canada's environment. We anticipate that the reform of CEPA will be this government's most important environmental legislative initiative. Given the new scientific evidence regarding the environmental and human health hazards, the federal government must demonstrate leadership in the protection of Canada's environment. A precautionary approach must be incorporated into CEPA, along with the principle of pollution prevention, public participation in decision-making, and an ecosystem approach to environmental management in Canada.

THE CONSTITUTION, FEDERAL-PROVINCIAL RELATIONS, HARMONIZATION AND CEPA

Issues for the Five Year Review of the Canadian Environmental Protection Act

by

Karen Clark, B.A., M.A., LL.B.

and

Barbara Rutherford, B.A., LL.B.
Research Associates
for the
CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY

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THE CONSTITUTION, FEDERAL-PROVINCIAL RELATIONS, HARMONIZATION AND CEPA

I. INTRODUCTION

In its document providing an overview of the issues for CEPA review,[1] Environment Canada identifies sustainable development and the coordination and harmonization of federal and provincial legislative and regulatory initiatives as two key issues. This paper explores the issues of constitutional basis of the federal role in environmental management, intergovernmental relations and the "harmonization" exercise currently being conducted under the auspices of the Canadian Council of Ministers of the Environment (CCME) in the context of sustainable development.

A brief overview of how governmental responsibility for environmental protection is allocated under the Canadian Constitution is provided. This is followed by a review of the past and current state of federal-provincial relations with respect to the environment. This review concludes that cooperation has been the exception rather than the rule in the environmental field.

Intergovernmental agreements are identified as an important exception to the general history of federal/provincial non-cooperation. Unfortunately, where the federal and provincial government have come to agreements to share responsibility for environmental protection, the results have been disappointing. These agreements present Canadian citizens with a number of challenges, as being administrative in nature, they require neither public comment nor review, and there are no mechanisms within them by which citizens can compel enforcement of the legislation to which the agreements apply.

Although not currently addressed within CEPA, the "harmonization" exercise presently being pursued through the CCME will have major implications for the future role of the federal government in environmental management in Canada. The harmonization initiative proposes to do something that has never been accomplished before: it attempts to establish clear, consistent, national environmental protection standards for Canada. However, given the poor past record of federal/provincial cooperation, and federal government's weak approach to its national role, the harmonization project has the potential to result in a "race for the bottom." The national standards achieved under harmonization may be whatever the lowest provincial standards are now.

Throughout the discussion, it is apparent Federal/provincial relations have been strongly coloured by federal reluctance to stand on its constitutional authority to protect the environment. Yet the achievement of environmentally sustainable development in Canada will require a strong federal role. The federal government must exercise its authority to set minimum national environmental protection standards for all Canadians.

II. FEDERAL JURISDICTION AND CEPA

The extent to which the Constitution of Canada affects the regulatory powers of the federal and provincial governments used to be an esoteric subject matter -- the province of constitutional scholars in their ivory towers. No longer can this be said to be true, as the average Canadian, including the average bureaucrat and politician, has been subjected to more constitutional debate during the past few years than they would likely have ever desired. That being said, it is necessary here to reiterate a summary of the division of powers as it relates to the federal government's management of the environment.

Constitutional law, even with its recent infamy, still remains one of the most complex areas of jurisprudence. Thus while we attempt to present a synopsis of the relevant constitutional issues pertaining to the CEPA review, this discussion should in no way be considered to be a comprehensive legal opinion.[2] Discussion of constitutional law is worse than useless in a vacuum; therefore our primary recommendation at the outset is that the Standing Committee refer specific questions of constitutional law to a panel of well-known and respected constitutional and environmental experts, including lawyers from outside the federal and provincial governments. Moreover, we heartily recommend that this advisory panel be struck with the mandate to recommend how CEPA reform can be accomplished under the constraints of the constitution; rather than encouraging yet another negative pronouncement on why the federal government cannot do what it must do to protect the health and environment of all Canadians. Our constitution is a "living tree" with flexibility to serve many generations of Canadians. What we have been lacking is the vision and innovation to use our constitution in this way. Instead, we allow our politicians and bureaucrats to pass the "jurisdictional buck" back and forth, most often behind closed doors without the public's input.

As should be well-known by all Canadians at this point, the Constitution of Canada has two distinct parts; the *Constitution Act*, 1867 contains the division of powers between the federal and the provincial governments and the *Constitution Act*, 1982, contains the Canadian Charter of Rights and Freedoms. Both parts affect the manner in which environmental regulation can be implemented. The division of powers provides the blueprint for which level of government is entitled to regulate in any specific subject matter, while the Charter constrains the manner in which each government can apply their laws to individuals.

The division of powers presents the largest obstacle to a comprehensive federal environmental regulatory framework, although many hold the opinion that this obstacle is more perceived than real.[3] A growing body of scholarly papers have addressed the constitutional division of powers over the environment, indicating at the very least the profound concern that the constitution should not limit the ability of Canadian governments to adequately regulate environmental matters.[4] Furthermore, the balance of these writers affirm the necessity for a strong federal role in environmental management.

That the enactment of CEPA was intended to provide this strong federal role in relation to

the regulation of toxics is not disputed.[5] Similarly, it is not disputed, at least by the environmental community and some constitutional scholars, that CEPA has not lived up to its potential in terms of the ecological necessity to provide comprehensive management of toxics in the Canadian environment.[6] Finally, it is clear that the constitutional mandate of CEPA should be reviewed in light of the imperative of a pollution prevention approach.[7]

What follows is a brief discussion of general constitutional law principles as well as a brief overview of the most important federal powers over the environment. The general principles provide the basis rules for constitutional interpretation and are provided here to demonstrate that such interpretation is not a simple question of deciding whether an impugned provision or regulation is local or national in scope.[8]

1) General Principles of Constitutional Law

i) The Nature of the Division of Powers

Theoretically, most of the division of powers pursuant to sections 91 and 92 of the Constitution Act, 1867 are supposed to "exhaustive" and "exclusive"; meaning that in respect of the powers enumerated therein, each government is supreme within its own sphere. As a practical matter generally, and particularly with respect to environmental matters, there is considerable overlapping jurisdiction, or "concurrency". The doctrine of concurrency allows the legislative competence of both levels of government to coexist as long as there is no direct conflict[9], and belies the notion of exclusivity.

ii) Pith and Substance

When courts are faced with the question of jurisdictional competence, the first threshold to cross is to determine the "pith and substance" of the impugned law. This inquiry leads to the determination of the most important feature of the law for the purposes of classification according to the division of powers[10]; taking into consideration both the purpose and effect of the law.

The application of the pith and substance doctrine allows one level of government to enact laws that impact substantially on matters outside its jurisdiction.[11] In such situations, the court finds that the impact on the other government's jurisdiction is permissible as it is merely "incidental" to the constitutionally valid purpose and effect of the law.

A law which contains both federal and provincial powers can in some cases be treated as competent to both the federal and the provincial legislatures.[12] Where concurrent jurisdiction is identified, there exists the possibility for conflict between a valid federal law and a valid provincial law. Federal laws are usually paramount in the case of conflict. The question of how far one government can go in impacting another government's jurisdiction

has been the subject of much judicial discussion as the lines of the division of powers can easily become imprecise, upsetting the delicate balance of power between the two levels of government.

iii) Ancillary Power

Whereas the constitutions of the United states and Australia include an "ancillary" power in the enumerated federal powers, there is no such power in the Canadian constitution; nevertheless, several courts have implied such a power.[13] Other courts have developed different tests to set limits to the encroachment by one level of government on areas of jurisdiction of the other.[14] To make this area of constitutional law more oblique, there is *obiter dicta*[15] from the Supreme Court in 1978 that supports the existence of the "ancillary" power but only with respect to the Parliament of Canada.[16] It is not clear why the articulation of such a doctrine is needed given the "pith and substance" doctrine.[17] In any event, as a general conclusion it can be said that some encroachment is allowable sometimes under some circumstances.

When a law is validly enacted, there may arise the question of whether the law validly applies to the other level of government. Such questions of interjurisdictional immunity are beyond the scope of this discussion.

iv) Paramountcy

The doctrine of paramountcy applies when there are inconsistent, or conflicting, federal and provincial laws. In such a situation, the federal law prevails, rendering the provincial law *ultra vires* to the extent that it is inconsistent or in conflict with the federal law. It must be stressed that the question of paramountcy only arises once it is determined that there are conflicting validly enacted federal and provincial laws. Otherwise, the problem of conflict is resolved without recourse to the doctrine of paramountcy. A validly enacted provincial law would have to expressly contradict a federal law for it to be defeated; that is, where "compliance with one law involves a breach of the other".[18]

2) Specific Federal Areas of Jurisdiction Pertaining to CEPA

i) Peace, Order and Good Government ("POGG")

Since the Supreme Court of Canada's decision in 1988 concerning the federal government's regulations under the *Ocean Dumping Control Act*[19], there has been renewed interest in the federal government's peace, order and good government ("POGG") clause[20]. The majority of the court held that marine pollution could be regulated by the federal government under the "national concern" branch of POGG. The majority held that marine pollution fit the

national concern test of being a matter that had a "singleness," "distinctiveness," and "indivisibility" such that the provinces, even if they act in unison would be unable to effectively legislate in the area. Le Dain J., for the majority stated: "For a matter to qualify as a matter of national concern... it must have a singleness, distinctiveness and indivisibility that clearly distinguishes it from matters of provincial concern and a scale of impact on provincial jurisdiction that is reconcilable with the fundamental distribution of legislative power under the Constitution."[21]

This decision has been touted as powerful support for a federal environmental protection power; however, the court has since clarified that the environment is too diffuse a topic to be assigned to one level of government.[22] Thus, it is necessary to look at discrete areas of environmental regulation such as control over toxic substances.

The inability of the federal government to secure adequate provincial cooperation on toxics regulation to date presents strong evidence, in the context of any constitutional challenge to current and future CEPA provisions and regulations, that the provincial inability to regulate toxics requires unilateral federal action.[23] This evidence of unsuccessful efforts to cooperate on these matters of national and international importance would likely help support the federal government's assertion that federal legislation is justified under the "national concern" test.[24] Hogg goes so far to state that: "It seems, therefore, that the most important element of national concern is a need for one national law which cannot realistically be satisfied by cooperative provincial action because the failure of one province to cooperate would carry with it adverse consequences for the residents of other provinces."[25]

Moreover, the development of international law on toxics and biodiversity support that these issues have recently been recognized as matters on international importance and as such require federal regulation.[26]

The residual federal power, or POGG, has been used to fill the "gaps" in the powers divided between the federal government and the provinces,[27] as well as pertain to matters which are of "national concern".[28] The definition of matters on national concern was confirmed in the *Canada Temperance* case as follows:

> "In their Lordships' opinion, the true test must be found in the real subject matter of the legislation: if it is such that it goes beyond local or provincial concern or interests and must from its inherent nature be the concern of the Dominion as a whole (as, for example, in the Aeronautics case and the Radio case), then it will fall within the competence of the dominion Parliament as a matter affecting the peace, order, and good government of Canada, although it may in another aspect touch on matters specially reserved to the provincial legislatures. War and pestilence, no doubt, are instances; so, too, may be the drink or drug traffic, or the carrying of arms. In *Russell v. The Queen*, Sir Montague Smith gave as an instance of valid Dominion legislation a law which

> prohibited or restricted the sale or exposure of cattle having a contagious disease. Nor is the validity of the legislation, when due to its inherent nature, affected because there may still be room for enactments by a provincial legislature dealing with an aspect of the same subject in so far as it specially affects that province."[29]

The national concern branch of POGG was relied solely upon by the S.C.C. in three cases concerning; aeronautics[30], the national capital region[31], and marine pollution.[32]

ii) Criminal Law Power in Relation to Public Health

The constitutional validity of several important federal public welfare statutes has been upheld on the basis that the legislation was valid criminal law enacted for the protection of the health and safety of Canadians. The importance of the criminal law power in respect of the constitutionality of CEPA should not be understated. It is crucial that criminal penalties remain a part of CEPA's enforcement regime from a constitutional perspective.

The Hazardous Products Act

The Manitoba Court of Appeal upheld the constitutionality of certain provisions of the Hazardous Products Act which prohibit the selling of particular infant cribs on the ground that they were dangerous.[33]

The Food & Drug Act

The S.C.C. upheld certain provisions of the Food and Drug Act which prohibited the sale of contaminated or adulterate drugs and prohibited the sale of drugs in a false or misleading manner on the basis that the main purposes of the act were characterized as the protection of the public from adulteration and the suppression of fraud.[34]

The Clean Air Act[35]

The Manitoba Court of Appeal upheld the constitutional validity of the Clean Air Act, which prohibited the emission of air contaminants in quantities which would constitute a significant danger to the health of persons. Simonsen J. found that "the dimensions of the health risk arising from air pollution is not proscribed by provincial boundaries. The harmful ingredients in air pose a national health risk."[36]

The main issue in ensuring that the federal government has not used its criminal power to unlawfully usurp provincial power is the extent of the regulation and whether the legislative scheme contains prohibitions and/or the power to prohibit[37] in pursuit of some legitimate public purpose such as "public peace, order, security, health, morality..."[38]

The emerging body of scientific documentation of the adverse, irrevocable and persistent effects of toxics in the environment[39], as well as the evidence of cross-media contamination from toxics in our land, air and water, would support the submission of a very different brief by the government of Canada in 1994 to justify both prohibition of toxics and cradle-to-grave regulation of toxics[40], then would have been possible at the time of CEPA's enactment. Thus the analysis of CEPA's constitutional underpinnings must evolve in light of this new scientific reality. There can be no doubt today that inadequate regulation of toxics in Canada presents dangers to the health of all Canadians and Canadian ecosystems, as well as to other communities and ecosystems in the world.

iii) Trade and Commerce

The federal government has jurisdiction to enact laws in relation to "trade and commerce".[41] In order to limit this potentially pervasive federal power in a way consistent with the division of powers, the courts have determined that there are two prongs; "...(1) political arrangements in regard to trade requiring the sanction of parliament, (2) regulation of trade in matters of interprovincial concern."[42] It may also be that the power would include the general of regulation trade affecting the whole dominion.[43]

iv) Fisheries Power

The federal government also has power over "sea coast and inland fisheries"[44] This power allows the federal government to regulate over environmental matters that adversely affect fish. The courts have found that this power does not permit the federal government to prohibit or regulate water pollution, without there being a direct connection to the health of fish.[45] The regulation of toxics is clearly connected to the health of fish, whether the fish habitat is affected by water pollution or air deposition.

v) Taxation and Spending Powers

The federal government has the power to raise revenue through direct and indirect taxation. This taxation power potentially has many uses for environmental protection. However, the federal government's taxing power cannot be used to indirectly usurp provincial powers. Thus any use of a federal environmental "toxics" tax should be clearly associated with the federal government's toxics management program.

The federal "spending power" is not specifically enumerated in the constitution. However, the federal government can use this power to influence areas of provincial jurisdiction by subsidizing certain provincial activities and by allocating conditional grants to provinces where they follow federal rules. In the absence of a clear concurrent power over environmental protection, the use of such persuasion could be a valuable tool for

environmental regulation, especially with respect to national standard setting.

3) The Canadian Charter of Rights & Freedoms

The Charter provides for fundamental rules governing relations between individuals and the government. Again, any discussion of potential Charter infringements must be dealt with in the context of specific CEPA provisions or amendments. The most likely context in which such challenges could arise is in the enforcement provisions. The Charter protects individuals' procedural rights, including the right to silence.[46] Where an accused faces loss of liberty, life or security of the person, they cannot be compelled to provide self-incriminating information.[47] This limitation on the use of self-reporting data indicates the need for administrative penalties for some violations of CEPA.

4) Conclusions

The Canadian constitution presents a challenge in the reform of CEPA. The Act must be amended in a manner which ensures adequate protection of the environment and the health of Canadians from toxic contamination, and other environmental and health matters of national and international concern, while not being potentially subject to years of constitutional litigation. The political sensitivities regarding provincial autonomy[48] must not stand in the way of needed reform. Under several heads of power, the federal government has clear jurisdiction to regulate certain environmental matters, including the matter of the establishment of national standards for the control of toxic substances in Canada.

III. FEDERAL/PROVINCIAL RELATIONS AND CEPA

As argued above, there are clear constitutional grounds for federal jurisdiction over national environmental regulation. It is also clearly the case that, under the Constitution, responsibility for environmental regulation is most properly shared between the federal and provincial governments. This section of the discussion will review first the importance of cooperative federalism. Second, the discussion will review current federal/provincial relations as acted upon, and as provided for, under CEPA. A comparison of the former with the latter discussion will show that, so far as cooperation and coordination of effort are concerned, there is a marked shortfall in what could be accomplished. This shortfall will be relevant in our discussion in the section on harmonization.

1) Cooperative Federalism

Since the early 1980s, public and political attention has focused on the question of strong national standards in Canada. These concerns arose from a variety of factors: changes in the economy including the transition from a resource-based to a post-industrial, information-based economy, increasing awareness of the disparate impacts of these economic changes on the provinces, and an inclination on the part of the federal government to decentralize power.[49] Originally these concerns had to do with the national social support infrastructure (health care, unemployment insurance, pensions), but they also extend to other national concerns such as regulation of transportation and the environment. At approximately the same time that these concerns entered discussions of law and policy, came the Brundtland Report regarding sustainable development. Our Common Future strongly advocates nationally standardized environmental regulation, understanding that uniform standards protect against the creation of "pollution havens," as well as conferring other benefits.[50]

The basic idea of cooperative federalism is that the federal government will work with the governments of the constituent units of the federation to establish uniform and equitable regulatory standards and programmes that will be applied and administered jointly by the governments of the constituent units and the federal government. Cooperative federalism may also require the transfer of resources from the central government to the constituent governments, and the transfer of resources from richer to poorer constituencies. This transfer of resources is necessary because uniform standards require uniform capacity to meet and enforce those standards. In theory, cooperative federalism allows for uniform, consistent and equal provision of services, and application of regulations, in each unit of the federation. The benefits of centralized standards and cooperative federalism are clear: equitable distribution of resources ensure a better standard of living for the nation's citizens; a consistent and consistently applied regulatory regime is more efficient and predictable and therefore, more amenable to the interests of industry and economic activity generally.[51]

In practice, Canadian federalism provides for some elements of the model, such as the national health care system and transfer payments between the federal government and the

provinces. As discussed in the second section of this paper, Canadian constitutional law establishes a legal framework within which mechanisms of cooperative federalism function.

In Canada this has meant achieving national standards without infringing unacceptably upon provincial jurisdiction. It can also mean, in its broader sense, how one can achieve the benefits of national citizenship or policy harmonization without losing the benefits of more effective and efficient program delivery by the provincial or local levels of government.[52] The question of "infringing unacceptably upon provincial jurisdiction" has coloured much of the debate around cooperative federalism in the realm of environmental protection.

2) Uncooperative Federalism and Environmental Protection

There is a disconcerting consensus in discussions of the matter that the provinces resent federal intrusion in the realm of environmental regulation because the provinces were "there first." The consensus is disconcerting because, as "murky" a medium as Canadian constitutional law is, there is nothing in it to support the assertion that jurisdiction over a particular matter belongs to whoever gets "there first." Still, the claims are made:

> "In the short term, the expansion of environmental activities by both levels of government in the late 1980s has led to overlap and increased tension. CEPA was a major contributor to this tension, since it proclaimed a more interventionist federal presence in what had traditionally been largely a provincial domain of activity."[53]

And again:

> "The overall result [of CEPA] is a federal move into environmental protection territory that was previously regarded as largely, if not exclusively, provincial."[54]

The matter of jurisdiction has already been discussed in this paper, and the issue of the putative problem of duplication will be discussed below in the section dealing with harmonization. The rest of this part of the discussion will review the mechanisms under (and in the general vicinity of) CEPA that have attempted to deal with the aversion of the provinces toward the federal government stepping into their regulatory back yard.

i) Equivalency Agreements under CEPA

The equivalency agreements provided for under s. 34 of CEPA were enacted in response to provincial objections to federal intrusion on an area they already regulated.

> "Flexibility was introduced. [Under equivalency agreements] CEPA

> regulations, but not the entire Act, would draw back and not apply in provinces where it is agreed in writing between the federal minister and the provincial government that provincial laws are equivalent."[55]

Responses outside of governments to these provisions has been mixed. Some argue that equivalency agreements serve as a "roadblock" to effective, national regulation of toxics and will result in a patchwork of provisions across the country.[56] Others are more optimistic and see the potential in the equivalency agreement provisions for true harmonization of national toxics regulation.

But for the recent publication of the Alberta Equivalency Order, these discussions would be rendered moot by the fact that no province has, until now, entered into an equivalency agreement with the federal government.[57] RFI indicates that negotiations for other agreements have been ongoing for some time, however.[58] Equivalency has been a tough regulatory nut to crack for a number of reasons, only one of which is provincial disinclination to cooperate. RFI cites several problems that have been encountered on the way to equivalency: provincial incapacity to meet the equivalency criteria of sections 108 and 109 of the Act concerning citizen's requests for investigations; the fact that the federal government took more time than expected to put toxics regulations in place; the cost of formulating and implementing equivalency agreements; and the difficulty of determining what, exactly, "equivalent" means.[59]

Although equivalency agreements were to have been a concession to the provinces, RFI notes that "[t]he CEPA provision for equivalency agreements is clearly an irritant in federal-provincial relations."[60] The comments collected by RFI from provincial officials regarding equivalency reflect this:

> "Several provinces expressed their reluctance to change their laws, their priorities or the way they did business "just because the federal government wants to do things differently." They chafe at having to develop equivalent procedures and argue that greater emphasis should be placed on achieving equivalent results instead....They complain about being forced to undertake activities they would have chosen not to carry out....At least four provinces state that they do not intend to negotiate equivalency agreements...[which] reflects more an unwillingness to change their regulatory approach and a skepticism about the federal government's ability to go it alone than an implicit acceptance of the federal role. One provincial official sums up the attitude of several of his colleagues this way: 'Let's stand back and watch them try to enforce all these regulations."'[61]

The federal government has apparently softened its stance on equivalency, and appears to be bending more toward "equivalency of effect" provisions as opposed to identical provisions in provincial regulations, which may serve to deal with some of the complaints.

However, the other complaints expressed -- the aversion to doing things differently, being forced to undertake tasks not currently undertaken, and the aversion to "all these regulations" -- suggest a completely different kind of problem than federal "arrogance" or strict insistence on the requirement of equivalence.[62] These complaints indicate that the requirements of CEPA are more than some provinces are willing to implement and enforce. At a time when cooperation seems more important than ever, the stance of these provinces is problematic. The impact that this demonstrated provincial reluctance will have on national standards under the harmonization initiative will be discussed below.

ii) Administrative Agreements under CEPA

RFI reviews the main elements of administrative agreements under CEPA:

> "Section 98 of CEPA provides for bilateral federal-provincial agreements with respect to the administration of the Act. Administrative agreements represent "work-sharing" partnerships for the cooperative and reciprocal management of toxic substances under the authority of both federal and provincial legislation. The agreements aim to eliminate overlap and duplication and to provide a "one-window" approach to industry. In order to maintain ministerial accountability under CEPA, administrative agreements will provide information-sharing and other mechanisms to allow the federal government to verify industry compliance with federal regulations. The federal government reserves the right to intervene directly if federal requirements are not being met."[63]

RFI also notes that "administrative agreements do not have to meet the tough tests that equivalency agreements do."[64] While no administrative agreements have been signed to date, four are, apparently, "ready for signing."[65] Administrative agreements do not appear to irritate the provinces as much as equivalency agreements, but RFI notes some provincial officials' suspicion that "the federal government wants the provinces to do things 'the federal way."[66]

iii) Intergovernmental Agreements

While there are no administrative agreements, and only one equivalency agreement currently in force in Canada, Franklin Gertler notes that:

> "Environment Canada is party to several hundred intergovernmental agreements...To these agreements must be added certain orders in council that purport to delegate administrative and law enforcement authority."[67]

The fundamental problem posed by some of these agreements to the principle of the rule

of law and meaningful accountability to the public for their contents is that:

> "Law and policy for environmental protection in Canada are being articulated and implemented in some considerable measure through an obscure intergovernmental process that is inaccessible to the public and almost unknowable...This process often culminates in intergovernmental agreements and largely escapes both legislative control and judicial review."[68]

On the one hand, as reviewed above, there are many benefits to be gained nationally from co-operative federalism, but it can also have seriously detrimental effects:

> "...while agreements may be in the interest of executive government they may be contrary to the interest of the individual citizen and may undermine such important values as accountability and responsiveness."[69]

Gertler offers as an example of the problems of "bureaucratic administrative federalism" the 1987 "Canada-Alberta Fisheries Agreement", that played an important role in the Oldman River Dam controversy:

> "When [citizens] wrote to the Minister of Fisheries and Oceans demanding the application of the [*Environmental Assessment and Review Process Guidelines Order*] on the grounds that effects on fish habitat and fisheries were federal matters and the responsibility of the department, the Minister refused, in large part on the basis of "long-standing administrative agreements."...The correspondence in the Oldman litigation demonstrates several dangers associated with intergovernmental agreements delegating the administration and enforcement of federal environmental law. First, the general spirit of the agreements is such that federal officials will defer to the scientific evaluations and decisions of provincial authorities. Second, while lip service is paid to ongoing federal involvement and responsibilities, the administrative arrangements are regarded as precluding federal enforcement action...Finally, there are no remedy or appeal provisions in such agreements."[70]

Intergovernmental agreements provide the opportunity for the provinces and the federal government to forget their differences and come to agreement. However, when the two levels of government have in the past managed to agree on environmental protection in this fashion, the agreements have all the appearance of agreeing to do little. In delegating its authority under these agreements, the federal government appears to actually abandon its responsibilities, leaving the province more-or-less free to do as much, or as little, as it wishes with its delegated authority. The ramifications of this behaviour will be discussed below in more detail in the context of "harmonization."

iv) Reforming the Use of Intergovernmental Agreements Through CEPA

Gertler argues that a separate act dealing with intergovernmental agreements should be made into law. However, specific provisions dealing with intergovernmental agreements could also be made part of CEPA. These new sections might provide that:

* the intention to negotiate an intergovernmental agreement is made public, through pre-publication, public consultation, and the publication of draft agreements in Part I of the *Canada Gazette* with an appropriate comment periods;

* once agreements have been concluded, they be published in the *Canada Gazette* part II and indexed;

* all agreements require *detailed* annual reporting to Parliament on the administration and enforcement of federal laws or equivalent provincial laws; and

* all agreements have sunset clauses requiring periodic review.

In addition, the federal government should always retain its right to prosecute under federal statutes when entering into such agreements. Mechanism permitting citizens who believe that enforcement by provincial officials is inadequate to petition for federal enforcement or to undertake private prosecutions, should also be included in agreements.[71]

3) Federal/Provincial Advisory Committee

Section 6 of CEPA provides for the creation of a Federal/ Provincial Advisory Committee

> "...for the purpose of establishing a national framework for national action and taking cooperative action in matters affecting the environment and for the purpose of avoiding conflict between, and duplication in, federal and provincial regulatory activity..."

According to the CEPA Annual Report 1992-1993:

> "Representatives from Environment Canada, Health Canada and each of the provinces and territories compose the Federal-provincial Advisory Committee (FPAC). This group ensures that the federal and provincial governments consult with each other and take action together to protect the environment form the effects of toxic substances. FPAC also aims to achieve nationally consistent environment standards."[72]

The Annual Report notes that the action undertaken by FPAC so far has been the creation

of several FPAC working groups (Ozone-Depleting Substances, Air Quality Guidelines, and CEPA Partnerships). Whether these working groups "ensure" federal-provincial consultation and action to protect the environment from the effects of toxic substances is not clear.

What is clear in the brief RFI review of FPAC is that the Committee does provide the provinces with something else to complain about:

> "Interviews with FPAC members and a review of the minutes of FPAC meetings indicate a general satisfaction with the Committee's operations. It is important, however, not to confuse this satisfaction with provincial acquiescence with the status quo. At least two provinces question whether FPAC should continue to exist; their scenario for CEPA reform, which includes a more modest role for the federal government, has the Environmental Protection Committee of CCME playing the necessary federal-provincial coordinating role."[73]

As will be discussed in detail below, the Canadian Council of Ministers of the Environment (CCME) may already be playing the "necessary federal-provincial co-ordinating role." Whatever role FPAC plays, it appears to be diminishing in importance to the provinces and territories, as suggested by the fact that the committee has never achieved its original plan to meet four times a year.[74] The Committee now meets twice a year, but, at the spring, 1993 meeting, only seven of twelve provincial and territorial representatives attended.[75] The reason offered for the reduced number of meetings, and the reduced number of attendees at the meetings is the expense.[76] A better explanation might be that the work statutorily created for FPAC is understood by the provinces and the territories as being done by another body, the CCME.

4) Canadian Council of Ministers of the Environment (CCME)

In current discussions of interjurisdictional cooperation and harmonization of federal/provincial environmental regulation, FPAC is never mentioned; the CCME, however, is. The Council, comprised of the federal, provincial and territorial Ministers of the Environment, has existed in one form or another since the early 60's. Its current form came into being in 1989. As for the Council's activities, this is what its brochure says:

> "The Canadian Council for the Ministers of the Environment (CCME) is the *major inter-governmental forum in Canada for discussion and joint action on environmental issues of national and international concern.* The Council is made up of environment ministers from the federal, provincial and territorial governments. These 13 ministers normally meet twice a year to discuss *national environmental priorities and determine work projects to be carried out under the auspices of CCME.*"[emphasis added]

The CCME, so far identical to FPAC in every way, save that it includes the federal Minister of the Environment, differs from FPAC in that it has a wider mandate (FPAC is bound to matters dealing with toxics under CEPA, while CCME has no statutory bounds to the environmental matters it may apply itself to) and it has a permanent Secretariat office in Winnipeg (funds for the office are supplied jointly by the provinces and territories, based on population; the federal government provides one third of the funding). Quite unlike FPAC, which forces the provinces to acknowledge a subordinate status to the federal government, the unique nature of the CCME puts the provinces "in a stronger position to resist federal proposals."[77]

The CCME appears to be one of the best hopes in Canada for achieving cooperative federalism in environmental regulation. The question that must be asked, however, is whether the CCME represents the beginning of a new cooperative federalism in Canadian environmental regulation based soundly on principles of constitutional law, or represents another version of the "bureaucratic administrative federalism" described by Gertler.

IV. HARMONIZATION

1. Introduction

Until it adopted its new form in 1989, the CCME was an obscure, relatively uninfluential, purely political body that allowed off-the-record interaction between Canadian Ministers of the Environment. However, "the Council's long-established norm of consensual decision-making" has evidently strengthened "the provinces' ability to constrain federal involvement, particularly in joint ventures."[78] This is why "revitalization of the Council was consciously pursued by some provinces as a means to establish a credible alternative to federal policy-making."[79] This may also be why the provinces and the federal government have chosen the CCME as the forum within which to work toward harmonization.

Harmonization is not an initiative under CEPA. However, as harmonization will have a tremendous impact on all environmental regulation in Canada, it is important that it be discussed in the context of CEPA review.

The equivalency agreements under CEPA were intended to achieve harmonization -- that is, they were supposed to eliminate duplication and overlap of laws emanating from different levels of government. They were also, in theory, to establish consistent, minimum standards for environmental protection nation-wide. The imperative of reducing overlap and duplication remains at the heart of the new harmonization imperative, although now there is more at stake than simple efficiency:

> "Protection of the environment, while remaining vitally important to Canadians, must now be seen in a broader context. A context that includes maintenance of jobs and social programs, expenditure control, greater public participation in decision making and the globalization of economic and environmental considerations....
>
> ...Canada's Ministers of the Environment have recognized these changing trends and have concluded that the way in which we manage our environmental responsibilities has to change. They believe that a window of opportunity exists to undertake a fundamental review of Canada's environmental management regime and to establish a new regime based on cooperation, and a more effective definition of roles, responsibilities and capacity to act. They believe that our environmental protection objectives can be best met through a new management regime."[80]

Toward creating that new management regime, the Ministers established a Task Group to define the scope of and develop a process leading to a Management Framework for Canada's Environment.[81] The Task Group proposes that the purpose of the harmonization initiative

should be:

> "to develop a new Management Framework for Canada's Environment, based upon cooperation and an effective and efficient definition of roles and responsibilities, that will lead to and enhance the maintenance of a consistent and high level of protection of Canada's environment."[82]

The Task Force also proposes a number of objectives and principles that should guide the development and implementation of the Framework. Attention should be drawn to the fact that the proposal scrupulously avoids mention of the words "law", "regulation", "statute" or anything that might suggest legislative or parliamentary involvement, or attract the requirements of public notice and publication in the Gazettes. The whole plan is proposed as a "management framework", and will result in an intergovernmental agreement the form of which has yet to be determined, although it may be roughly similar to one recently signed in Australia.[83]

2) Questions and Concerns Regarding the "Harmonization" Exercise

If the resulting intergovernmental agreement is to be similar to the ones discussed above, then the proposal must raise serious concerns. Harrison notes that the provinces have worked to revitalize the CCME because it has strengthened their ability to "constrain federal involvement", and provides an "alternative to federal policy making." Will the harmonization agreement -- as did the Canada/Alberta Fisheries Act agreement -- also result in an "alternative" to federal enforcement of federal laws? In the absence of federal enforcement under the harmonization agreement, will the provinces be free -- as Alberta was -- not to follow federal legislation?

These questions, and other concerns, arise from four aspects of the plan in particular:

i) the focus on the issues of "efficiency" and "duplication and overlap," as opposed to environmental protection;

ii) the proposals that "roles and responsibilities" be determined on the basis of "effective use" of labour and capacity and not, apparently, on the basis of legally defined responsibilities under the Canadian constitution;

iii) the potential for the intergovernmental dynamics of the harmonization exercise, particularly in the context of a weak federal role, to generate a "race to the bottom" in terms of environmental standards; and

iv) the emphasis on "partnerships" with regulated sectors in the implementation of a "harmonization" agreement.

In sum, the harmonization initiative's objectives of clear, effective national standards for environmental protection and of interjurisdictional cooperation are worthy of support. However, there is a concern that, in an effort to achieve harmony, efficiency and standardization, the initiative might lose sight of the requirements of the Constitution and the rule of law. It may also lose sight of the goal of effective environmental protection.

i) "Duplication and Overlap" and the Goal of "Efficiency"

The ineffective implementation and enforcement of federal environmental laws have been reviewed elsewhere in this submission. Our conclusion in that section was that the failure of the legal regime to achieve much in the realm of environmental protection had more to do with lack of political will -- as evidenced by an under-funded, inadequately trained and imprecisely mandated Department of the Environment -- than any inherent flaw in the legislation. Given that there is very little federal environmental law to enforce, and very few people to enforce it, the repeated claims of "duplication" are mysterious. What, exactly, is being duplicated? Where, in a regulatory environment where the federal government acts on only three (of twenty) regulations, is there overlap?

Clear evidence of the existence and the detrimental effects of "duplication and overlap" on industry, the public and the environment should be provided, as there is a serious concern that the ultimate effects of the harmonization exercise, as presently conceived, may be lower environmental standards, less regulation and less effective enforcement. This concern is reinforced by the description of the second objective of the exercise, which is to "lead to greater clarity, predictability and certainty in government decision making processes." This objective is more fully explained:

> "The public and the business sector will be assured of more predictable and consistent environmental decision making. This will facilitate decision making by companies that operate in more than one jurisdiction and will help ensure that the public will not have to deal with duplicative processes. Both the public and the private sector will face reduced costs and will bear a lighter regulatory burden."[84]

It is not clear how "the public" has to deal with "duplicative processes." Indeed, members of "the public" currently deal with a dearth of processes that allow them to work to protect the environment. Complaints about "duplicative processes" and the current "regulatory burden" are chiefly made by business interests. The concerns of industry are valid and important. However, as presently conceived, harmonization appears to privilege these interests over others, which casts some doubt on how much the initiative can or will serve the interests of the Canadian public and the environment.

ii) The Division of Roles and Responsibilities

While there is not a lot of law in Canada regarding the delegation of powers, what little there is is clear: constitutionally identified legislative powers may not be delegated.[85] As argued elsewhere in this paper, the division of powers provides significant protection for the environment and for the rights of Canadians. But, were one to deviate from the recognized, legal, mechanisms in the name of efficiency and harmonization, one would "[blur] the effective division of powers and [render] ineffective existing mechanisms for legal control over government."[86] The harmonization initiative must, therefore, not lose sight of the requirements of Canadian constitutional law.

Unfortunately, there are indications within the objectives and principles of harmonization that "lose sight" is just what the Task Force has done. It is difficult to disagree with the Task Force's conclusion that "efforts to address environmental issues through changes to the Constitution are not...an effective method for cooperation at this time."[87] Indeed, it is far from clear that changes to the Constitution are even necessary to provide for effective environmental management in Canada. However, the criteria proposed by the Task Force for the division of roles and attribution of responsibilities appear to take no notice at all of what the Canadian constitution requires.

The first of a number of these troubling principles states:

> "The Framework will establish clear definition of responsibility, in particular those areas of exclusive responsibility.
>
> Elimination of duplication, overlap and jurisdictional disputes will begin with reaching consensus on areas where exclusive responsibility can be assigned."[88]

However, much of this work has already been done for the Task Force -- in 1867, when the *British North America Act* became law, and set out in sections 91 and 92 what were the areas of exclusive responsibility of the federal and provincial governments. The Task Force appears to be suggesting that the Ministers achieve by "reaching consensus" something other than what is already written in the Constitution. This principle, therefore, seems to propose either constitutional reform, or illegal delegation. As the Task Force clearly states that constitutional reform is not an option, there must be a concern whether the results "reached by consensus" will conform to the existing constitutional division of powers legal.

The list of principles goes on:

> "Areas of shared responsibility will be identified and minimized while recognizing regional variation and the need for flexibility and capacity building...The division of roles and responsibilities will be based upon the most effective use of labour, resources, expertise and capacity."

Again, the point that the consideration of where roles and responsibilities lie must be based on a close reading of the Constitution must be emphasized. All of the other considerations -- as valid, and as sensible as they appear to be -- must be secondary. Otherwise the Framework will have no foundation in law and cannot stand.

iii) National Standards and the Dynamics of Harmonization

Harmonization includes the stated principle that "Consistent national standards will be developed and maintained."[89] The creation, implementation and enforcement of strong national standards for environmental protection is an important principle. Standardization may result in the efficiencies of fewer, clearer, regulatory requirements and potentially the efficiency of a "single window" of monitoring and enforcement activities. It is not clear, however, how such standards will be achieved under the harmonization exercise.

First, let us examine the foundation the harmonization initiative has to build on. The evidence presented by RFI in its report, and, generally the history of federal/provincial relations in matters of environmental regulation, indicate a lack of consensus that has to date rendered the achievement of consistent national standards all but impossible. The Task Force acknowledges that implementing harmonization requires "a commitment to cooperation that has not been evident to date."[90]

Harrison describes the dynamic of disagreement between the provinces and the federal government as the "regulator's dilemma".[91] This discussion has touched on some of the elements of the dynamic: the federal reluctance to regulate or impose itself on the provinces in spite of its clear authority to do so; the provincial resentment of any federal intrusion on environmental regulation (or, more accurately, as Harrison notes, federal intrusion on provincial resource management). Add to these elements the facts that some provinces, Ontario, Alberta and British Columbia primarily, and Quebec to a lesser extent, have over the past decade actually competed with one another in the establishment of tough regulatory programmes and well-organized, well-funded enforcement branches in their Ministries of the Environment. Other provinces have not been able to participate in these competitions because of lack of resources.

The provinces with their own strong laws and strong enforcement practices are more inclined to support national standards: if every province upholds strong standards, there will be less likelihood of capital flight to provinces where regulations are not as strict. The weaker provinces oppose strong national standards because they are disinclined to commit the resources to enforce higher standards.

Harrison studies an actual incident where this dynamic had an opportunity to play itself out in full: the formulation of the federal pulp mill dioxin and furan emissions regulations. At a time of high public concern about the presence of dioxins in pulp mill effluent, the federal government undertook to set new regulations under CEPA. Harrison's comments describing

the "end game" before the regulations were finally set are illustrative of our concerns, and bear quoting at length:

> "Since the dioxin issue coincided with the ... wave of environmental concern, provincial governments were eager to prove that they were not only doing a good job, but a better job than their neighbours. The resulting competition between Ontario, Quebec, Alberta and British Columbia to claim the most stringent standards probably resulted in tighter regulations for the pulp and paper industry, at least in the larger provinces....[But] when it came time to follow through on promises, provinces that had been eager to distance themselves from their neighbours in voters' eyes became quite eager to harmonize federal and provincial standards from the perspective of the regulated industry...Perhaps the most striking conclusion...is the weak role of the federal government...In addition to industry resistance, the federal government also faces resistance form provinces defending their own mills and their jurisdiction. It is striking that on occasions where some provinces were pressing for more stringent federal standards, it was the defensive provinces to which the federal government deferred. Thus, in many respects, the new federal regulations reflect the lowest common denominator among the provinces, rather than reinforcing the position of more stringent provinces."[92]

The first important pattern of governmental behaviour to note is that governments generally attend to environmental issues only in the context of high public concern about the environment. In times of low public interest, government activity correspondingly declines.[93] The second important pattern -- competition between jurisdictions in regulation-setting -- is attached to the first pattern: politicians take strong stances on environmental protection when there is political capital to be gained from doing so. The third important pattern to note is that, once the opportunity for political gain has passed, so too does the governmental resolve to regulate. Insecurity about the effects of strict regulation on industry sets in, and the provinces with strong regulations start to talk about "harmonization." The fourth, and final, pattern is unique to the federal government. While Harrison finds it "striking" that the federal government capitulated to the lowest common denominator, this seems entirely consistent with the general pattern of federal regulatory activity, or, more accurately, lack thereof in the environmental field.

There are parallels between these patterns of behaviour and the harmonization initiative, as well as some inconsistencies. One glaring inconsistency is that, although virtually all environmental regulation has arisen in whole or part as a response to citizen concerns about the environment, the harmonization initiative has arisen without the help of marked public concern. Rather, it is generally accepted that the recession of the early 90s has focused public attention on other matters.[94] Recall that the Task Force mentions in the Principles and Objectives paper that the Ministers of the Environment believe that a window of opportunity exists to undertake a fundamental review of Canada's environmental management regime and to establish a new regime based on cooperation, and a more

effective definition of roles, responsibilities and capacity to act.[95]

Is this "window of opportunity" the current public inattention to the environment? If so, and if the patterns described above work in reverse, then one should be concerned that, in the absence of strong public interest in the environment, governments may take the "opportunity" to downgrade environmental protection laws.

Public preoccupation with other concerns links harmonization with the second pattern of governmental behaviour. In a time where there is little political capital to be gained from taking a strong stance regarding environmental protection, it follows that there is little to be lost if environmental laws are eroded. This is particularly true if other concerns provide alternative sources for gaining political capital. These concerns are outlined by the Task Force: "fiscal constraints, [and] demands for deregulation[96]...concerns over the competitiveness of Canadian industry, serious reductions in government expenditures at all levels and increased public concern about the public debt issue and government inefficiency."[97] One could reasonably surmise that the political gains to be made by meeting these concerns will more than compensate for whatever, limited, losses may arise from whittling away at environmental standards.

However, it should be noted that while the environmental concerns of the Canadian public are not necessarily top of mind, they have neither disappeared completely. Harrison notes that the environment has become a "core issue" for Canadians, and is something they are always generally concerned about, even if other issues take occasional priority.[98] A general awareness of this fact on the part of Canada's Ministers of the Environment may account for the comparatively low profile of the harmonization initiative.

The harmonization initiative exactly parallels the third behaviour pattern described above. As already noted, harmonization is primarily concerned with the interests of industry, and the interests of government in keeping industry in Canada, which is analogous to the concern the "competing" provinces had once the competition over pulp mill regulations had settled down. Their worry then was the regulatory disadvantage they had created for themselves. The analogous concern for harmonization is the "competitiveness of Canadian industry." The harmonization initiative expressly targets "competitive standard setting" as something it will work to avoid. It will avoid competition by setting national standards at a level reached by consensus.

The stated goals of setting standards by consensus and avoiding competitive standard setting are completely at odds with well understood dynamics of policy innovation in federal systems. In federal systems, new policies are usually first developed and adopted at the state or provincial level, and then implemented nationally. The "anti-competition" element of the CCME proposal has the potential to significantly constrain the capacity of individual provinces to raise standards and experiment with innovative policy approaches in the absence of the consent of their partner governments in the federation.[99]

The fourth pattern indicates what will be the likely result of consensus-based standard-setting. The patterns that played themselves out over the pulp mill regulations will repeat themselves. The larger, richer provinces with high standards will push for standards like their's across the country. The provinces with lower standards, and fewer resources to enforce them, will have no interest in raising standards. The federal government, for all that it plays a lesser role in the forum of the CCME, will have to have the final say. And that say will be to set the standards in line with the poorer provinces. The national standards achieved by harmonization will be whatever the lowest standards are now. This result is inevitable so long as the federal government is unwilling to press the provinces to do anything more than what the least active province is prepared to do.

A "race for the bottom" does not have to be the inevitable result of harmonization. The fourth pattern of behaviour can and should be modified. The federal government can assert the authority it has to ensure environmental standards are not eroded.

iv) "Partnerships" and the Uncertain Role of the Public

One of the stated principles of the initiative is that "the development of the Framework will include an effective stakeholder involvement and consultation process." The annotation elaborates:

> "While the Framework is essentially a government to government initiative, public and stakeholder support will be essential to its success. Partnerships between governments and stakeholders will be developed."[100]

This raises at least two questions. First, what happens after the Framework has been developed? Second, which stakeholders have the resources and are therefore the most likely to develop partnerships with the governments, and what will the effect of those partnerships be on regulation and enforcement?

Regarding the first question, recall Franklin Gertler's arguments reviewed above. Remember, in the Oldman River Dam controversy, that after Alberta and the federal government came to their agreement about administration of the Fisheries Act, the public found virtually no toe hold to force either government to comply with the law. Public review, opportunity to comment and opportunity to compel enforcement of the provisions of the agreement, as provided for in Gertler's recommendations below, are necessary in order to prevent this circumstance from arising again.

Regarding the second question, the strengthening of "partnerships" between the government and stakeholders raises serious problems. As already discussed, harmonization currently privileges the interests of industry; "partnerships" between industry stakeholders and the government will further exacerbate this imbalance. Furthermore, the role of government is to regulate and enforce; "partnerships" will confuse and distort this role, and, as experience

as shown, will make enforcement more difficult, if not impossible.[101]

3) Conclusions

In light of the seriousness of the four concerns reviewed above, it is difficult, if not impossible, to endorse the CCME harmonization exercise as presently conceived. The justification presented in support of the effort (duplication and overlap) has yet to be fully demonstrated as a serious problem. In addition, the constitutional propriety of some of what is proposed as part of the exercise is open to serious question. Furthermore, the dynamics of the harmonization process among the provinces may lead to a "race for the bottom" and the adoption of "lowest common denominator" standards.

The likelihood of such an outcome is reinforced by the emphasis placed in the process on the concerns of business interests, and the weakness of the federal government's role as promoter of strong national environmental standards. The capacity of the process to result in constraints on the ability of provinces to raise standards independently and to adopt innovative policy approaches is also a serious matter. Finally, the process as presently conceived insufficiently provides for meaningful public participation before and after the "management framework" is agreed upon and made.

V. CONCLUSIONS AND RECOMMENDATIONS

1) Constitutional Jurisdiction and The Federal Role in Environmental Management

The federal government's jurisdiction over toxics is well-supported under several federal heads of power, some of which can provide needed constitutional support to others. The federal government's power to enact criminal law in respect of health, the peace, order and good government clause, the fisheries power, the spending power[102], the trade and commerce power, and the taxation power, separately and combined, provide the federal government with ample jurisdiction to enact minimum national environmental standards.

RECOMMENDATION

In order to ensure that nothing in CEPA prevents a broad reading of the federal government's environmental jurisdiction, in particular its capacity to set minimum national standards, the Preamble of CEPA be amended to explicitly state that:

> *"...Whereas the Government of Canada in demonstrating national leadership should establish national environmental quality objectives, guidelines, codes of practice and standards..."*

2) Intergovernmental Agreements

Intergovernmental agreements are a potentially useful mechanism for facilitating federal-provincial cooperation in environmental management. However, concerns exist regarding the extremely weak accountability mechanisms associated with the use of these agreements.

RECOMMENDATION

CEPA should be amended to provide that:

* *the federal government's intention to negotiate an intergovernmental agreement is made public, through pre-publication, public consultation, and the publication of draft agreements in Part I of the Canada Gazette with appropriate comment periods;*

* *once agreements have been concluded, they be published in the Canada Gazette part II and indexed;*

* *all agreements require detailed annual reporting to Parliament on the administration and enforcement of federal laws or equivalent provincial laws;*

* *all agreements have sunset clauses requiring periodic review; and*

* *all agreements should permit the federal government to retain its right to prosecute under federal statutes when entering into such agreements. Mechanism permitting citizens who believe that enforcement by provincial officials is inadequate to petition for federal enforcement or to undertake private prosecutions, should also be included in agreements.*

3) Harmonization

The "harmonization" process currently underway under the auspices of the CCME raises a number of serious concerns, and cannot be endorsed in its present form. The justification presented in support of the effort (duplication and overlap) has yet to be fully demonstrated as a significant problem. In addition, the constitutional propriety of some of what is proposed as part of the exercise is open challenge. Furthermore, the dynamics of the harmonization process among the provinces may lead to a "race for the bottom" and the adoption of "lowest common denominator" standards.

The likelihood of such an outcome is reinforced by the emphasis placed in the process on the concerns of business interests. The capacity of the process to result in constraints on the ability of provinces to raise standards independently and to adopt innovative policy approaches is also a major concern.

However, perhaps the most serious flaw in the harmonization project is the underlying potential for the federal government to abdicate any meaningful role in environmental management in Canada. The federal government appears willing to limit itself to whatever role the provinces regard as being appropriate for it. Furthermore, the federal government appears to be distinctly unwilling to press the provinces to adopt standards or requirements beyond which they would be prepared to act upon on their own initiative. This raises questions regarding the federal government's future role in domestic environmental policy.

The federal government must affirm the fact that it is interested in what happens to Canada's environment and will intervene to the full extent of its jurisdictional capacity when it feels it is necessary to do so. The establishment of minimum standards for environmental protection within Canada is clearly provided for by CEPA and other federal statutes. It is now up to the federal government to demonstrate the political will necessary to effectively fulfill these responsibilities.

ENDNOTES

1. Environment Canada. Reviewing CEPA: An Overview of the Issues (Ottawa: Environment Canada, 1994)

2. The general principles we elaborate herein are meant to provide a road map for constitutional interpretation in the context of specific issues, should any arise during the review of CEPA.

3. See for example, T. Vigod and R. Lindgren, Overview of Federal Law, Regulation and Policy (Toronto: The Canadian Environmental Law Association)

4. See for example; Rodney Northey, "Federalism and Comprehensive Environmental reform: Seeing beyond the Murky Medium," Osgoode Hall Law Journal (1989), Vol.29, No.1, p.127; D.P Emond, "The Case for a Greater Federal Role in the Environmental Protection Field" (1972) 10 Osgoode Hall Law Journal 647; D. Gibson, "Constitutional Jurisdiction over Environmental Management in Canada" (1973) 23 U.T.L.J. 54; D. Tingley, ed., Environmental Protection and the Canadian Constitution (Edmonton: Environmental Law Centre, 1987) including A.R. Lucas, "Natural Resources and Environmental Management: A Jurisdictional Primer," p. 31; A.R. Lucas, "Case Comment on R. v. Crown Zellerbach Canada Ltd." (1989) 23 U.B.C.L.Rev. 355; D. Gibson, "Environmental Protection and Enhancement under a New Canadian Constitution," in Beck and Bernier, eds., Canada and the New Constitution (Montreal: The Institute for Research on Public Policy, 1983); Mains, "Some Environmental Aspects of a Canadian Constitution", (1980) 9 Alternatives 14; R. Lindgren, "Toxic Substances in Canada: The Regulatory Role of the Federal Government," in Into the Future: Environmental Law and Policy for the 1990s (Edmonton: Environmental Law centre, 1989); P. Muldoon and B. Rutherford, Environment and the Constitution: Submission to the House of Commons Standing Committee on Environment 1991 (Toronto: The Canadian Environmental law Association, Brief No.200); and P. Muldoon and B. Rutherford, "Designing an Environmentally Responsible Constitution," 18 Alternatives No.4, May/June 1992; and B. Rutherford, "The Constitutional Division of the Environment: A Comment on the Oldman River Decision", National Journal of Constitutional Law, Vol.2, No.2, July 1992.

5. CEPA's preamble is evidence of this, declaring among other important environmental facts of life that "....the presence of toxic substances in the environment is a matter of national concern;" that "...toxic substances, once introduced into the environment, cannot always be contained within geographic boundaries;" and that "..the Government of Canada in demonstrating national leadership should establish national environmental quality objectives, guidelines and codes of practice."

6. CELA, Overview of Federal law, Regulation and Policy. See also R. Northey, "Federalism and Comprehensive Environmental reform," p.129; wherein it is stated that "The government retreated from regulating all toxic chemicals from cradle-to-grave..."

7. Mandating the reduction of the use, and the zero discharge, of toxic chemicals is consistent with the pollution prevention approach. Accordingly, regulation of the use of toxics in commerce must be part of CEPA's mandate.

8. The veiled reference here is to the 1992 decision of the Quebec Superior Court: The Attorney General of Canada v. Hydro-Quebec and The Attorney General of Quebec (File No. 410-36-000024-914; August 6, 1992; Andre Trotier, J.S.C.)

9. Where there is conflict, the doctrine of paramountcy is invoked. federal laws are always paramount to, that is take precedence over, provincial laws.

10. Peter Hogg, Constitutional Law of Canada, (Toronto: Carswell Company of Canada, 2nd. ed., 1985), p.314.

11. Ibid.

12. This is known as the "double aspect" doctrine; but the courts have not made it clear when it is necessary to choose between the federal and provincial features of a challenged law. Hogg, ibid., at p.317 adopts Lederman's explanation:

> ...the double aspect doctrine is applicable when "the contrast between the relative importance of the two features is not so sharp." In other words, the double aspect doctrine is the course of judicial restraint. When the court finds that the federal and provincial characteristics of a law are roughly equal in importance, then the conclusion is that laws of that kind nay be enacted by either the Parliament or a Legislature.

13. Hogg, The Constitutional Law of Canada, p.334.

14. This branch of constitutional law has developed into a truly confusing and conflicted doctrine. The S.C.C., in the span of three weeks, decided two cases which are in direct conflict. In Multiple Access v. McCutcheon [1982] 2 S.C.R. 161, the court upheld a federal law that impacted on provincial jurisdiction because the impact had a "rational, functional connection" with the federal law. In contrast, in Regional Municipality of Peel v. MacKenzie [1982] 2 S.C.R. 9, the court would not uphold an extension of the federal

criminal law where it could not be shown that such an extension was "essential" to the legislative scheme. The former test is less strict and preferred by Hogg. (See Hogg, pp.334-337).

15. "Obiter dicta" are words of an opinion entirely unnecessary for the decision of the case. Such words are not binding as precedent. Black's Law Dictionary, Abridged 5th Edition, 1983.

16. In Laskin C.J.'s dissent in A.-G. Que. v. Kellogg's of Canada [1978] 2 S.C.R., in which the majority upheld a provincial law regulating advertising on television (television being within federal jurisdiction) directed at children, he states that: "...in so far as the British North America Act may be said to recognize an ancillary power or a power to pass legislation necessarily incidental to enumerated powers, such a power resides only in the Parliament of Canada." (p.216)

17. As stated above, according to the pith and substance doctrine, a valid law can encroach upon areas outside the enacting legislature's jurisdiction. See Bank of Toronto v. Lambe (1987) 12 App. Cas. 575, and Hogg, Constitutional Law of Canada p.314.

18. Smith v. The Queen [1960] S.C.R. 776, p.800.

19. (S.C. 1974-75-76, c.55). The case is called R. v. Crown Zellerbach, [1988] 1 S.C.R. 401.

20. The opening words of s.91 of the Constitution Act, 1867 confer on the federal Parliament the power:

> to make laws for the peace, order, and good government of Canada, in
> relation to all matters not coming within the classes of subjects by
> this Act assigned exclusively to the Legislatures of the provinces...

21. Crown Zellerbach [1988] 1 S.C.R. 401, 438. Interestingly, Hogg finds the S.C.C.'s substitution in 1979 (The Queen v. Hauser, [1979] 1 S.C.R. 984) of the criterion of "newness" for "distinctness" (from the Anti-Inflation Reference and later to be referred to in Crown Zellerbach.) to specious. He concludes that "newness" is irrelevant and unhelpful..." See also Lysk on this point, (1979) 57 Can. Bar Rev. 531, 571-572 and Crown Zellerbach, 432, per LeDain J. for the majority. Hogg cautions about the reference to `newness' by LaForest J. dissenting at p.458.

22. Friends of Oldman River Society v. Canada, [1992] 1 S.C.R. 3, at pp.63-64.

23. The opportunity for establishing equivalency agreements under CEPA also works in the favour of justifying federal jurisdiction.

24. See Hogg Constitutional Law of Canada. In the second S.C.C. case on "national concern," Munro v. National Capital Commission [1966] S.C.R. 663, Cartwright J. writing for a unanimous court referred to the unsuccessful efforts to zone the national capital region through the cooperative action of the two provinces of Ontario and Quebec.

25.See Hogg, Constitutional Law of Canada 3rd. ed., s.17.3(c). The provincial inability test was referred to in Crown Zellerbach, Labatt Breweries v. A.-G. Can. [1980] 1 S.C.R. 914, 945; Schneider v. The Queen [1982] 2 S.C.R 112, 131; The Queen v. Wetmore [1983] 2 S.C.R 284, 296.

26. The United Nations Conference on the Law Of the Sea was referred to in Crown Zellerbach. Although the Labour Conventions case seemed to rule out a separate international treaty power, Hogg suggests that the earlier Radio Reference case (Re Regulation and Control of Radio Communication in Canada [1932] A.C. 304) holding that the federal power to perform treaties came within POGG may be finding renewed judicial favour. See Hogg, s.17.2.

27. Hogg, Constitutional Law of Canada 3rd. ed., s.17.3(a); for example, treaties, official languages and offshore resources.

28. Canada Temperance Federation; Russell v. The Queen (1882); A.-G. Ont. v. A.-G. Can (Local Prohibition)[1896] A.C. 348: "Their Lordships do not doubt that some matters, in their origin local and provincial, might attain such dimensions as to affect the body politic of the Dominion, and to justify the Canadian Parliament in passing laws for their regulation or abolition in the interest of the Dominion. But great caution must be observed in distinguishing between that which is local or provincial and that which has ceased to be merely local or provincial, and has become a matter of national concern, in such sense as to bring it within the jurisdiction of the Parliament of Canada." (p.361).

29. Canada Temperance, pp.205-206.

30. Johannesson v. West St. Paul [1952] 1 S.C.R. 292.

31. Munro v. National Capital Commission [1966] S.C.R.663.

32. R. v. Crown Zellerbach [1988] 1 S.C.R. 401.

33.R. v. Cosman's Furniture (1972) Ltd. et al. (1976), 32 C.C.C. (2d) 345 (Man. C.A.).

34. R. v. Wetmore et al. (1983), 2 D.L.R. (4th) 577 (S.C.C.).

35. This act was repealed by s.145 of CEPA Part IV of CEPA allows the federal government to regulate air pollution from federally controlled works, undertakings and activities such as nuclear power

plants, railways and airlines. The regulation of fuels and fuel additives under the former Clean Air Act is now contained in ss.46-48 of CEPA. Part V of CEPA (sections 61-65) pertains to domestic sources of air pollution that have international effects. Section 61(2) codifies the "provincial inability" test and s.63(3) allows for equivalency agreements regarding federal regulations attempting to curb air pollution with international dimensions (either causing international air pollution or causing (or likely to cause) a "violation of an international agreement entered into by the Government of Canada in relation to the control or abatement of pollution." Note that the reference is to any international agreement regarding pollution, not just air pollution.

36. Re Canada Metal Co. Ltd. and The Queen (1982) 44 D.L.R. (3d) 124 (Man.Q.B.), pp.130-131.

37. Mere regulation of an activity is not criminal law. See Re Information Retailers Association of Metropolitan Toronto Inc. (1985), 22 D.L.R. (4th) 161 (O.C.A.), City of Montreal v. Arcade Amusements Inc. et al. (1985) 18 D.L.R. (4th), 161 (S.C.C.) and Labatts.

38. These decisions all applied the test in the seminal case regarding the true nature of criminal law: see Reference re Validity of s.5(a) of Dairy Industry Act (The Margarine Reference) [1949] 1 D.L.R. 433 at pp. 472-3. Some legitimate public purpose must underlie the prohibition:

A crime is an act which the law, with appropriate penal sanctions, forbids; but as prohibitions are not enacted in a vacuum, we can properly look for some evil or injurious or undesirable effect upon which the law is directed. That effect may be in relation to social, economic or political interests; and the legislature has had in mind to suppress the evil or to safeguard the interest threatened. Is the prohibition then enacted with a view to a public purpose which can support it as being in relation to criminal law? Public peace, order, security., health, morality: these are the ordinary though not exclusive ends served by that law..."(emphasis added).

39. Dr. Theo Colburn's work for World Wildlife Fund US, recent reports of the International Joint Commission, Toxic Trade Update 6.4 (Greenpeace) citing Environmental Research Foundation, Rachel's Hazardous Waste News, #343, June 24, 1993.

40. This is probably true of biotechnology given the signing of the Biodiversity Convention, the rapid loss of biodiversity and the patenting of life-forms around the globe. In addition, the discovery and use of indigenous plant species for medicinal purposes is also

41. S.91(2).

42. Citizens' Ins. Co. v. Parsons (1881), 7 App. Cas. 96

43. Ibid.

44. Constitution Act, 1867, s.91(12).

45. See R.v. Fowler, [1980] 2 S.C.R. 213, 113 D.L.R. (3d) 513 and compare Northwest Falling Contractors Ltd. v. The Queen, (1980), 113 D.L.R. (3d) 1 (S.C.R.)).

46. The right to silence is considered to be a component of the procedural rights contained in s.7, and is also protected by s.11(c), 11(d), and s.13.

47. For example, see R. v. Weill's Food Processing Ltd. (1991), 6 C.E.L.R. (N.S.) 248 (Ont. Ct. J.), wherein the Ontario Court of Justice held that using mandatory spill reports as evidence would be contrary to an accused's right to silence.

48. Such sensitivities are reinforced by court decisions such as the Hydro Quebec case wherein a Que. Supreme Court struck down a PCB regulation under CEPA as being unconstitutional ("ultra vires"). Until, this vaguely-reasoned decision has been taken to the S.C.C., it cannot be considered to be a definitive statement on the constitutionality of the regulation. Moreover, should it be found to be unconstitutional by the S.C.C., it is likely possible to sever this regulation from the remainder of CEPA, leaving the balance of the Act and its regulations intact. In such a scenario, the appropriate response, we submit, is to identify possible inadequacies of the evidence put forward by the federal government to support its constitutional mandate and/or determine how better to define the scope of regulations under CEPA to avoid overstepping provincial jurisdiction.

49. Institute of Intergovernmental Relations. Approaches to National Standards in Federal Systems. (Kingston: Queen's University Press, September, 1991) at 1.

50. World Commission of Environment and Development. Our Common Future. (New York: Oxford University Press, 1987) at 314 ff.

51. The analysis in this paragraph is discussed generally in, Institute of Intergovernmental Relations, Approaches to National Standards, ibid.

52. Institute of Intergovernmental Relations, ibid, at 3.

53. Resource Futures International. Evaluation of the Canadian Environmental Protection Act: Final Report. (Ottawa: Ministry of Supply and Services, 1993) at 99.

54. Alastair R. Lucas, "Jurisdictional Disputes: Is 'Equivalency' a Workable Solution?" in Donna Tingley, Ed. Into the Future: Environmental Law and Policy for the 1990's. (Edmonton: Environmental Law Centre, 1990) at 25.

55. Lucas, ibid, at 25-26.

56. See Toby Vigod and Rick Lindgren "Overview of Federal Law, Regulation and Policy: A paper presented to the Canadian Institute two day course on Environmental Law and Regulation in Ontario", (Toronto: Canadian Environmental Law Association, 1994) at 25-26.

57. See Canada Gazette, Part I (July 23, 1994), at p. 3459.

58. Resource Futures International, Evaluation of CEPA, at 104.

59. Ibid., pp.102-103.

60. Ibid, at 103.

61. Ibid.

62. Ibid., at 103.

63. Ibid, at 104.

64. Ibid.

65. Ibid, at 105. One of these agreements, the Quebec/Canada agreement on pulp and paper effluent, is, according to Stephania Trombetti at Environment Canada, waiting only on the signature of the Premier of Quebec, which, at the time of writing, August 1994, may wait until the elections in Quebec are over. An Access to Information request has been entered by the author for this agreement.

66. Ibid, at 105.

67. Franklin Gertler, "Lost in (Intergovernmental) Space: Cooperative Federalism in Environmental Protection", in Steven A, Kennett ed., Law and Process in Environmental Management: Essays from the Sixth CIRL Conference on Natural Resources. (Calgary: Canadian Institute of Resources Law, 1993) at 261-262.

68. Ibid., at 260.

69. N. Bankes, "Co-operative Federalism: Third Parties and Intergovernmental Agreements in Canada and Australia" (1991) 29 Alta. L. Rev. 792 at 797.

70. Gertler, "Lost in Intergovernmental Space," at 274.

71. Ibid., at 281-282.

72. Environment Canada. Canadian Environmental Protection Act: Report for the period April 1992 o March 1993. (Ottawa: Minister of Supply and Services, 1993) at 3-4.

73. Resource Futures International, Evaluation of CEPA, at 100.

74. Ibid.

75. Ibid.

76. Ibid.

77. Kathryn Harrison, "Prospects for Intergovernmental Harmonization in Environmental Policy," forthcoming in Douglas Brown, Janet Hiebert, eds., Canada -- The State of the Federation 1994 (Kingston: Institute of Intergovernmental Relations, 1994) at 27.

78. Ibid, at 28.

79. Ibid.

80. Canadian Council of Ministers of the Environment. "Rationalizing the Management Regime for the Environment: Purpose, Objectives and Principles," undated, at 2-3.

81. The Harmonization Task Group members are: Dr. David Besner, Director, Policy and Intergovernmental Affairs, Department of the Environment, Fredericton, NB; Mr. Andre Harvey, Assistant Deputy Minister, Sustainable Development and Conservation, Department of Environment and Wildlife, Sainte-Foy, Quebec; Ms. Janet Bax, Director, Federal Provincial Relations Branch, Policy and Communications Directorate, Environment Canada, Hull, Quebec; Ms. Jisele Jacob, Acting Director General, Program Integration Directorate, Environment Canada-EPS, Hull, Quebec; Mr. Ken Richards, Coordinator, Intergovernmental Relations Office, Ministry of the Environment and Energy, Toronto, Ontario; Mr. Dick Stephens, Director, Legislation and Intergovernmental Affairs, Department of Environment, Winnipeg, Manitoba; Mr. Bob Ruggles, Director, Water Quality Branch, Environment and Resource Management, Regina, Saskatchewan; Mr. Ron Hicks, Assistant Deputy Minister, Research and Strategic Services, Alberta Environment Protection, Edmonton, Alberta; Mr. Jamie Alley, Director, Corporate Policy, Planning and Legislation, Ministry of Environment, Land and Parks, Victoria, British Columbia.

82. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," at 4.

83. The Australian "Intergovernmental Agreement on the Environment, May, 1992" was the original model for the Canadian intergovernmental agreement on Harmonization. However, according to Barbara Czech, Director of Communications, CCME, the final Canadian agreement may take a form completely unlike the Australian agreement.

84. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," at 5.

85. A.G. Nova Scotia v. A.G. Canada (Interdelegation Reference), [1951] S.C.R. 31.

86.Gertler, "Lost in (Intergovernmental) Space," at 255.

87. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," p.7.

88. Ibid.

89. Ibid, at 8.

90. Ibid, p.9.

91. Kathryn Harrison, "The Regulator's Dilemma: Regulation of Pulp Mill Effluent in a Federal State," presented at the Annual Meeting of the Canadian Political Science Association, Ottawa, June 1993.

92.Ibid, at 31-33.

93. Many writers beside Harrison have noted this tendency. See, among others, Toby Vigod and Richard D. Lindgren, "Overview of Federal Law, Regulation and Policy" (Toronto: Canadian Environmental Law Association, 1994); George Hoberg, "Environmental Policy: Alternative Styles", in Michael M. Atkinson, ed., Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993); Tom Conway, "Taking Stock of the Traditional Regulatory Approach" in G. Bruce Doern, ed., Getting It Green: Case Studies in Canadian Environmental Regulation (Toronto: C.D. Howe Institute, 1990); Ted Schrecker, "Of Invisible Beasts and the Public Interest: Environmental Cases and the Judicial System" in Robert Boardman, ed., Canadian Environmental Policy: Ecosystems, Politics and Process (Toronto: Oxford University Press, 1993).

94. See George Hoberg, "Environmental Policy: Alternative Styles" in Michael M. Atkinson (ed.) Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993) 307.

95. Canadian Council of Ministers of the Environment. "Rationalizing the Management Regime," p.3.

96. Ibid, p.9.

97. Ibid, p.1.

98. Harrison, "Prospects for Intergovernmental Harmonization in Environmental Policy," p.23.

99.For a discussion of the dynamics of policy innovations in federal systems see, for example, K.McRoberts, "Federal Structures and the Policy Process," in M.Atkinson, ed., Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993), pp.159-160.

100. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," p.8.

101. George Hoberg, "Environmental Policy: Alternative Styles," at 315.

102. Northey suggests that "... the federal government could use its spending power to provide uniform administration and enforcement of comprehensive environmental regulation across Canada. Equally, it could use this power to link regional economic development to environmental performance. Secondly, the federal government could use its declaratory power to create a national scheme of toxic waste disposal sites, thus removing a major regulatory burden facing the provinces. Federal responsibility for this area could encourage provinces to assist the federal government in thoroughly controlling the remaining aspects of a comprehensive cradle-to-grave scheme." (p.180)

CEPA AND ENVIRONMENTAL LAW ENFORCEMENT

By:

Karen Clark, B.A., M.A., LL.B.

and

Barbara Rutherford, B.A., LL.B.
Research Associates

CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY
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CEPA AND ENVIRONMENTAL LAW ENFORCEMENT

I. INTRODUCTION

The discussion that follows reviews the implementation of, and enforcement practices under, CEPA since it became law in 1988. We argue that both implementation and enforcement practices fall far short of what could be realized under the Act. The important question arising from our analysis is: why has there been such a shortfall? One argument, reviewed below, that has arisen in the past is that enforcement practices fail when sanctions under an environmental protection statute are "too strict." It is beyond the scope of this discussion to deal with the question of whether or not this argument is correct in relation to any other environmental statute. We believe, however, that this argument cannot be properly applied to CEPA, as there has never been a demonstrated effort to rigorously implement or enforce the Act.

What there has been, since before CEPA was passed, is a marked reluctance on the part of the federal Department of the Environment to act as a regulatory and enforcement body -- the role CEPA requires it play. It is this reluctance, attributable in large part to the "advisory" role originally conceived as the chief purpose of the Department of the Environment, that has resulted in failures in CEPA's implementation and enforcement.

The discussion below first reviews the "enforcement debate", and discusses the importance of criminal sanctions in environmental law. We conclude that, contrary to the "all or nothing" stances that dominate the "enforcement debate", regulatory regimes enacted to protect the environment should occupy a full range of mechanisms, from voluntary compliance agreements to the fullest sanction permitted by law. Next, we discuss enforcement patterns under CEPA. We argue that the Act's weak enforcement record has negatively impacted on the federal government's perceived legitimacy to act in the field of environmental regulation. We review the evidence of the absence of the political will that meaningful implementation and enforcement of the Act requires: the Department of the Environment's constitutional reticence; its chronic lack of adequate resources; and its unclear mandate. We conclude that the shortfall in implementation and enforcement of CEPA since 1988 is the result of these weaknesses.

It may very well be, however, that there are inadequate resources allocated to the inspection and enforcement branches of Environment Canada. Although we recommend that some reallocation of Environment Canada's budget take place to reflect the importance of enforcement in CEPA achieving its goals, we also advocate an additional enforcement tool: citizen suits. A citizen suit provision would allow citizens to be the "eyes and ears" of the government -- assisting in the implementation of a well-known and widely articulated enforcement and compliance policy.

II. THE IMPORTANCE OF ENVIRONMENTAL LAW ENFORCEMENT

The solution is not less law, but better law.[1]

In its overview of the issues for CEPA review, Environment Canada asks how the Act can contribute to sustainable development, and suggests that "environmental management" needs to be rationalized and generally improved. This section of our discussion assumes that "environmental management" cannot be distinguished from environmental *regulation*.

1) The Enforcement "Debate"

From the inception of contemporary environmental regulation in the 70s, a debate has raged regarding which method of obtaining compliance is the most effective. It is generally agreed that, in Canada, there have been two common approaches:

> "...the two approaches may be referred to as "promotion" and "enforcement." The former...consists of non-coercive measures to encourage or promote improved environmental performance. An enforcement strategy...relies more heavily on the use of prosecution and formal sanctions."[2]

Each approach has its advocates, and each its opponents. Studies undertaken within the last decade have shown that where strict sanctions have been provided for under the legislation, there has been a marked shortfall in enforcement.[3] For some writers, this shortfall indicates that negotiated, promotional agreements are swifter, surer and more economically feasible than hard line prosecutions.[4] Others argue that prosecutions are swifter, surer and more economically feasible than long, drawn out negotiations.[5] Strict enforcement policies, some say, damage the relationship between the regulated parties and the enforcing ministry; the relationship becomes adversarial, and cooperation becomes impossible.[6] Still others argue that firm enforcement practices improve the relationship between the enforcers and the regulated party, indicating that once the regulated parties understand that the rules of the regime will be enforced, they become more cooperative.[7]

For all that these positional debates appear to cancel one another out, they do point to the helpful conclusion that there is no one best way to obtain compliance with environmental regulation. The fact that neither approach is entirely effective does not mean that either should be entirely abandoned. It is our understanding, however, that "voluntary" compliance will occur sooner and more efficiently if regulated industries understand that regulators will enforce compliance if need be.

As enduring as the promotion/enforcement debate has been, it is clear that the polarized positions within it are becoming anachronistic. As Canada and other jurisdictions approach a quarter century of environmental regulation, it is increasingly acknowledged by all sides that any regulatory regime must embrace a full spectrum of approaches, from the entirely

voluntary to the strictest expression and fullest sanction available under the law. The challenge before us is to bring CEPA up to date with current thinking.

2) Importance of Criminal Sanctions in CEPA

It must be emphasized that criminal sanctions have a key role to play in environmental regulation. The first attempts at environmental regulation in Canada proposed strict prohibitions, and swift enforcement. These laws were a response to increasing public awareness of the dangers posed by pollution to human health and the environment. These laws also sought to express the public's abhorrence of wanton acts of environmental destruction, and to act as a deterrent to anyone who might commit such a crime. The strictness of and the stigma attached to these sanctions were understood to represent society's opinion of criminal polluters. So far as can be determined, this opinion has not changed.[8]

However, even before CEPA was passed into law, discussions arose suggesting that, not only did strict sanctions militate against effective enforcement of environmental laws, they were markedly disproportionate to the lion's share of environmental offenses.[9] The conclusion proposed by Webb and others was that criminal sanctions should be reserved for undefined "egregious" offenses against the environment, if, indeed, there should be criminal sanctions at all. The position that appears to be emerging from this conclusion is that there is no place in environmental regulation for criminal sanctions, which casts some doubt on the fate of the offence provisions under CEPA.[10]

However, Webb's discussion deals exclusively with the question of whether or not there should be a new *Criminal Code* offence dealing with crimes against the environment. In this specific context, Webb concludes that current provisions in the Code deal adequately with environmental offenses that endanger or take human life. Elsewhere in his discussion, Webb indicates that he does not believe that the general run of environmental offenses (regulatory violations such as improper storage, or accidental spills) fit the legal definition of a criminal act, and attaching "criminal stigma" to these acts merely obfuscates the issues and complicates enforcement.

Webb is correct that regulatory infractions often are not comprised of what the law requires to be the elements of a criminal offence. He is also correct that at least some of the current regulatory regime can adequately deal with these infractions without extending further into criminal law. However, it would be a grave error to extrapolate from Webb's conclusions that there can be no such thing as an environmental crime, nor any need for criminal sanctions.

The "mens rea" (guilty mind) requirement of criminal law and the standard of proof "beyond a reasonable doubt" do not obviate the need for criminal sanctions against crimes against the environment. These requirements are part of criminal law in order to protect the civil

rights of the accused. There is no reason to believe that convicting environmental criminals will be any easier than convicting other criminals. But there is nothing persuasive in the argument that there cannot be a "crime against the environment" simply because it will be difficult to gain a conviction. Finally, Webb's conclusions appear to be influenced by his understanding that actual criminal acts against the environment are uncommon. Murder is also rare; that does not prevent society from extending its fullest sanction against it. Moreover, were murders to stop tomorrow, it is unlikely that the crime of murder itself would be stricken from the Code. The frequency or infrequency of crimes against the environment is irrelevant to whether or not there should be laws against them.

Webb's and others' thinking on the question of whether or not there must be a Criminal Code sanction against crimes against the environment appears to be influenced by the polarized debates described above. There is an "all or nothing" air to their positions. For example, dissenting Law Reform Commission of Canada Commissioners state that criminal sanctions on top of regulatory sanctions will send "conflicting signals to the regulated parties" and "divert attention away from the real problems of regulatory enforcement."[11] Whatever the Commissioners believe to be the "real" problems of regulatory enforcement, they also appear to believe that sanctions must either be all regulatory, or all criminal, with nothing in between. As noted above, and as will be discussed below in detail, the most effective new environmental regulatory regime will occupy all the points between.

The Law Reform Commission wrote that the majority of the Commissioners are convinced of the need to use criminal law to underline the value of respect for the environment itself and stigmatize behaviour causing disastrous damage with long-term loss of natural resources.[12] We are also convinced of that need.

Many things have changed since the early days of contemporary environmental protection laws. Two decades of enforcement have educated us about the strengths and weaknesses of regulatory and non-regulatory methods to control threats to the environment. One thing that has not changed is society's abhorrence of those who would deliberately or recklessly threaten the health of the environment. Neither has the need changed to deter such behaviour. The expression of public abhorrence and the deterrence of criminal polluters are functions that have been performed by the offence provisions under CEPA, and are functions they should continue to perform.

III. THE CEPA ENFORCEMENT RECORD

1) The CEPA Review - What is at Stake?

CEPA has been at the centre of its own "enforcement debate." The Act's passage was accompanied by statements that Environment Canada intended to "get tough" with polluters. However, in the result, "toughness" does not appear to have played a significant role in the Department of the Environment's strategy to control polluters. Rather, the Department

follows a "promotional" strategy, preferring to cooperate with regulated industries in order to attempt to secure compliance. Only rarely does the Department prosecute under the Act. The prosecutions that do arise pertain to infractions of only a few of the regulations under CEPA. These prosecutions generally do not result in high fines. The key question in the context of the CEPA review is whether this contradictory situation of a strong Act and weak enforcement practices can accomplish the goals of sustainable development and pollution prevention. In our view, it cannot.

Improving the effectiveness of the Act requires more than merely changing the Act, and more than restructuring the enforcement branch of the Department of the Environment (although both of these changes are required). As discussed in detail below, two fundamental policy changes are also required. First, the federal government must accept and act on its clear authority and responsibility to make and enforce environmental regulations. Secondly, the Department of the Environment must move beyond the "advisory" role that was its original mandate, and accept the mandate which CEPA provides to it: that of a strong regulatory agency.

The federal government must now, as it reviews CEPA, confront the legacy of its reluctance to assert its legitimate jurisdiction to implement and enforce the Act. As reviewed elsewhere in this submission, plans have been initiated to harmonize federal/provincial environmental regulation.[13] There are also increasing international pressures to not only standardize regulations, but to coordinate them with the imperatives of sustainable development and pollution prevention as well. Environment Canada has shown some tentative interest in including these considerations in the CEPA Review.[14] The challenge that now confronts the federal government is how it will demonstrate that it has preserved for itself the regulatory legitimacy that these initiatives will require.

2) Environment Canada's CEPA Enforcement Record

The record of enforcement practices under CEPA suggests that when Environment Canada feels it can act, it does.[15] However, this resolve to action has resulted in an average of less than five prosecutions per region per year under CEPA and the *Fisheries Act*, and a cumulative national average of approximately ten prosecutions per year under CEPA. The highest incidence of CEPA-related prosecutions come under the Ozone-Depleting Substances Regulations (twenty-five, or forty-two per cent of CEPA prosecutions), the Ocean Dumping provisions under s. 67 (fourteen, or approximately twenty-four per cent), the PCB Storage Regulations and Interim Order (eleven, or approximately nineteen per cent) and the Gasoline Regulations (eight, or seven per cent). It should be noted that prosecutions in Ontario brought under the Gasoline Regulations have been withdrawn or stayed as the government plans to change the regulations.[16]

While prosecutions are rare, the incidence of guilty pleas and convictions is comparatively high; all regions score conviction rates of eighty per cent or higher, four out of five score

ninety per cent or higher. High fines are only infrequently levied; over sixty per cent (forty-eight out of a total of seventy-eight fines levied under CEPA and the *Fisheries Act*) have been less than ten thousand dollars. Of the remaining thirty fines, only two have been for one hundred thousand dollars or more. The highest fine ever levied by the courts was one million dollars for thirty-six counts of violations under s. 36(3) of the *Fisheries Act*. The next-most-frequently prosecuted offenses, under the Ozone Depleting Substances regulations, have resulted in fines ranging between three and one hundred thousand dollars; fines for PCB regulations offenses occupy a range between three and thirty thousand dollars.

The fact that fines are rarely very high does not necessarily indicate anything other than judicial reluctance to levy harsh penalties. It does cast significant doubt, however, on the arguments, cited above, that suggest severe penalties are a disincentive to enforcement. If the worst Environment Canada officials thought an offender was going to get in court was a fine between ten and thirty thousand dollars, one would expect, according to the logic of the arguments, that they would undertake more than ten prosecutions a year.

There are a total of twenty-four substance-controlling regulations under CEPA, half of which existed originally under the Acts CEPA sought to consolidate.[17] Yet, only three (the ozone-depleting substances regulations, the ocean dumping regulations, the PCB regulations) of them are enforced with any frequency. The conclusion that we draw from this review of the statistical record is that Environment Canada is most likely to act when:

1) there is overwhelmingly clear precedent in the law (the *Fisheries Act* has been law since just after Confederation; federal jurisdiction over ocean dumping has been affirmed by the Supreme Court of Canada);

2) there is virtually no overlap with provincial jurisdiction (the CFC regulations arise from Canada's international obligations under the Montreal Protocol);

3) there is high public awareness of and concern over certain substances that makes action politically popular (the PCB regulations);or

4) some combination of the above factors.[18]

What these patterns of enforcement indicate is that the federal government has whittled down its jurisdiction -- and its perceived legitimate scope of action -- to a small, safe, sphere, from which the federal government may find it difficult to extricate itself when the time comes to do so.

i) Eroding the Legitimacy of a Federal Role in Environmental Protection

By "legitimacy," this discussion means the perception that a government, by occupying a field of activity (that it has legal grounds to occupy) and by exerting its influence in that field,

presents to the public, industry and other governments the message that it is in the field, it is supposed to be there, that it is effective, and that the effects of its presence and activity are for the general benefit. When a government operates in a circumspect manner in a field it is supposed to act in -- as the federal government has done in the field of environmental regulation and enforcement -- it undermines its perceived legitimacy to occupy the field. That is to say, even though the federal government has uncontradicted jurisdiction to regulate in some fields of environmental law, its muted behaviour has resulted not only in the perception of its shirking its responsibility, but also in the sacrifice of the legitimacy of its actions in the field.

The greatest blow against legitimacy, of course, occurs when a government's reluctance to act creates an incapacity to act, such as that described by Conway:

> "The ... result has been a malleable regulatory process based heavily on exhorting compliance agreements. When spending could be called for on employment and regional equity grounds, neither the capacity nor the desire for regulators to act was there. In short, regulators often found themselves without the carrot or the stick."[19]

Legitimacy is also eroded when whatever action is taken has little positive effect. There are, for example, only a few concrete indications that promotional practices have effected marked gains in environmental protection. There is, on the other hand, considerable evidence that promotional strategies are particularly ineffective with large, heavily-polluting companies:

> "In 1987 the Canadian Environmental Advisory Council (CEAC) ...identified a pattern of almost two decades of systematic non-enforcement of the antipollution provisions of the *Fisheries Act* in Quebec, despite the existence of a number of land-based sources of continuous discharge of highly toxic substances which seem to enjoy complete immunity from prosecution....An internal memorandum by a Department of Fisheries and Oceans official leaked in December, 1989, was bitterly critical of the federal 'negotiate and compromise at all costs philosophy' of non-enforcement of *Fisheries Act* violations against a number of large firms in British Columbia."[20]

Others have noted that the "bipartite deal-making" (the basic framework of promotional strategies) between federal regulators and those they regulate generally serves the interests of the regulated, not the regulators.

> "While state institutions are relatively weak, business has formidable power resources at its disposal. In addition to large financial resources and control over vital information, business has clear organizational advantages...Since environmental regulation tends to be organized by sector...Canadian business has been well organized to influence the process. Moreover, where it really counts, where the regulator meets the polluter in the enforcement function --

> at the level of the firm -- Canadian business is quite strong. On top of these organizational advantages, business control over investment is an extremely powerful resource, giving business the ability to threaten divestment if regulation becomes too stringent."[21]

Promoting as opposed to enforcing the requirements of CEPA has had the effect, therefore, of not only starkly limiting the effectiveness of regulatory activity, but has put the federal government in a position where it is subordinate to the industries it is supposed to regulate.

If the federal government intends to take on the challenges of pollution prevention and sustainable development under CEPA and possibly other legislation, it cannot continue to stay within its small, safe sphere. Rather, it must return to the "first principles" of its constitutional authority to regulate the environment and to its own claims made when CEPA became law. As described in detail below, CEPA rode in on the fanfare of getting tough with polluters. There is a strong inclination now, on the part of Environment Canada, to readily attribute its weak enforcement history, following the analysis of Webb and others, to the failings of this approach. However, as there has been no demonstrated will to rigorously enforce CEPA, the rationalization that CEPA enforcement failed because it was too rigorous seems wrong. It is our understanding that other factors have had a strong role to play in CEPA's weak enforcement record.

3) CEPA'S Defeating Political Paradox

Enforcement practices under CEPA have been confounded by the political paradox that has coloured government action under and around the Act since the day it was passed into law. CEPA was "sold" to the Canadian public, in the words of Minister of the Environment Tom McMillan, as "the country's first environmental bill of rights", "the most comprehensive piece of legislation in the western world",[22] and as an Act under which punishment would be swift, significant and sure:

> "Sanctions will include million-dollar-a-day fines. ... The new law will also place responsibility squarely where it belongs--on the shoulders of the chief executive officers and presidents of companies who permit violations to occur. They will be subject to jail sentences of one to five years. And the government intends to enforce the law with vigour."[23]

Whatever the government's intentions were with the passage of CEPA into law, they were not as stated. One might be inclined to hazard the suggestion that the word "vigour" more accurately describes the way in which the federal government has avoided its responsibilities under the Act.

When CEPA was enacted, the government of the day seems to have concluded that CEPA provided it with an opportunity for cosmetic environmental regulation: the Act gave the

appearance of implementing a strong regulatory regime, without requiring the government to actually do so.[24] One result of this evident strategy has been a high degree of public cognitive dissonance about the federal government's role in environmental protection, and an ongoing erosion of the general perception of the legitimacy of federal activity in the realm of environmental regulation.[25] If the political agenda underlying the passage of CEPA was to dissociate the federal government from perceptions that it had a strong role to play in environmental regulation, then one must accept the conclusion that CEPA has been something of a success. However, this is not the "success" one would reasonably expect from the fanfare CEPA rode in on, or, indeed, from the words of the Act itself. Nor does this "success" meet the requirements of sustainable development and pollution prevention.

Any review of CEPA must acknowledge that many of the failings of Act's implementation and enforcement have to do with this political paradox, and not with the Act itself.

4) Lack of Constitutional Capacity or Lack of Political Will?

The bold statements by the Minister of the Environment notwithstanding, little else of the federal government's actions relating to the Enforcement of CEPA show much boldness. On the contrary, as discussed in detail below, the federal Department of the Environment operates with the triple handicap of constitutional reticence, inadequate resources and an uncertain mandate. These factors lead to the circumspect, inefficient and ineffective patterns described above and must be remedied in order for CEPA to meet the requirements of sustainable development and pollution prevention.

i) Constitutional Reticence

The federal government has clear and legitimate jurisdiction over certain matters requiring environmental regulation. However, the federal Department of the Environment has been largely pre-occupied -- before and after CEPA -- with not interfering with what it considers to be matters under provincial jurisdiction, and with not "[aggravating] federal-provincial relations."[26] It is our view, shared by many other commentators, that the federal government's concern with its jurisdictional authority is more perceived than real.[27] The political purpose served by these concerns is that they have provided the federal government with an excuse not to effectively implement and enforce CEPA. The history, mandate and internal policies of the Department of the Environment all reflect the federal aversion to exerting its constitutional authority in the realm of environmental regulation.

ii) Inadequate Resources

Since before CEPA, the federal Department of the Environment has been staffed by individuals inadequately trained to achieve the department's ostensible mandate.[28] In the

mid-70s, the problems with the staff and its capacities were described as:

> "...its inability to establish and carry out rigorous compliance procedures; an overtaxed and declining scientific and investigative capacity; uncertainty and insecurity in federal-provincial and interdepartmental relations; and a lack of economic and legal literacy.[29]

While CEPA was to have directly addressed some of these problems, recent stock-taking by Resource Futures International (RFI) of Department of the Environment behaviour under CEPA shows little improvement. The department is understaffed, and the staff is inadequately trained. The Department of the Environment investigation and enforcement staff for the entire country number eight-six people,[30] approximately the same number of people employed by the Ontario Ministry of Environment and Energy to undertake investigation and enforcement. Hiring policies populate the department with people with technical expertise, but with little training or direction by their superiors to enforce the Act.

The information resources for the department, in this day of international computer communications, are woefully inadequate, and significantly contribute to the inefficacy, inefficiency and inconsistency of enforcement policies.

> "...There is no standard format for inspection of investigation reports. Enforcement staff in each region are organized differently, use different administrative procedures and in some cases rely on different enforcement priorities...Compliance histories and inspection and investigation information are decentralized and incomplete, both within and across the regions...Each region has a different tracking system. Ontario and Quebec have no tracking system...Since information on enforcement from other regions is not available, except by ad hoc phone contact, there is a lack of consistency in enforcement across the country...Inspection results are not always reported back to the company being inspected. Inspectors are not always informed of investigation results."[31]

RFI reports that *one person* has been hired to create a centralized data management system for the whole country in order to solve these problems. This further suggests that a realistic commitment of resources to effective implementation and enforcement has yet to be achieved.[32]

iii) Uncertain Departmental Mandate

As already noted, when CEPA was enacted the federal government pledged, on the one hand (the hand proffered to the public) to "get tough" with polluters. On the other hand (the hand that appears to be actually controlling the Act's implementation), the government supports a cooperative, promotional approach. The net result of this legislative

schizophrenia is a federal department that does not know what its job is. It cannot be surprising, then, that it has difficulty getting its job done.

The history of the creation and the first eighteen years of the federal Department of the Environment (from 1970 to 1988, when CEPA was passed into law) reveals that the department was not originally conceived as one with powers to regulate and enforce. Rather, its role was to provide information to other federal departments.

> "In this sense, the Department of the Environment shared many features with the Ministries of State for Science and Technology and Urban Affairs, which were created at the same time. Like the Ministries of State, Environment Canada, with its extensive environmental research programmes, but limited regulatory and program delivery role, appears to have been intended to operate largely on the principle that 'knowledge is power.'"[33]

The understanding was that other departments would look to the Department of the Environment for its "expertise" in environmental matters. However, the fashion in which the department was cobbled together from disparate and distinct departments of other ministries,[34] the fact that the duties of the department were often shared with other departments,[35] and the comparatively low status in Cabinet of Ministers of the Environment,[36] made the accomplishment of even this limited role quite difficult. Brief periods of concern over high-profile environmental issues such as acid precipitation occasionally raised the profile of the Department of the Environment. At least ostensibly, the department did have a role to play in assessing the environmental impacts of federal undertakings.[37] However, then, as now, there was strong opposition to any initiative that appeared to interfere with the jurisdiction of the provinces.[38] The department responded to this opposition by sticking to an advocacy strategy, and working through partnerships with regulated industries and provincial environmental officials.[39] The passage of CEPA did not appreciably change this pattern of behaviour. The "information support" role of the department as originally conceived has not fundamentally changed.

However, the passage of CEPA has created a pressure point in the Department of the Environment, one that has been described as the department's "promotion/enforcement" dichotomy. The tensions created by the dichotomy arise directly from the inconsistencies between "tough" wording of CEPA and the conciliatory strategies of the department. Investigations staff, as already mentioned, are hired for their technical proficiency. Their first purpose, apparently, is to promote the goals of the Act rather than to enforce it. RFI notes that good technicians do not necessarily make good enforcers.

> "...many of Environment Canada's inspectors are reluctant to enforce because they are technically trained and therefore do not have an "enforcement mentality." They deal with other technically trained people in the regulated industries and share a common professional problem-solving ethos, which is not congruent with the enforcement approach. Inspectors are also reluctant

> to enforce because they inevitably develop relationships with the regulated industries that they are reluctant to disrupt by "getting tough." This problem is particularly severe when the same people are inspecting as are investigating and laying charges."[40]

The problem becomes even more severe when investigators (who may actually have more of an "enforcement mentality" than RFI grants) have to rely on the decisions of senior management regarding whether or not a prosecution will go forward.[41] Once passed senior management, a case must also pass the scrutiny of the Prosecution Group of the Justice Department which makes the final decision of whether or not to prosecute. According to one Department of the Environment official, however, the Justice Department is not the bottleneck in the prosecution process.[42] The indications are, rather, that senior management stonewall lower-level initiatives to prosecute. RFI notes that the direction senior management at the Department of the Environment is tending toward is more promotion, and less enforcement.

> "Within Environment Canada, recent policy statements have created the perception among many of the enforcement staff that official policy has moved away from the relatively strict approach outlined in the Enforcement and Compliance Policy."[43]

The role that senior management has played in keeping a close rein on CEPA enforcement policies must be acknowledged, and must be addressed.

Change as a result of the CEPA review must happen not only in how the department is structured, but in how the role of the department is conceptualized. The Ontario Ministry of Environment and Energy provides a model for how the federal Department could be restructured. Ontario's Ministry of Environment and Energy has separate information and enforcement branches. It also has an in-house legal services department that works with the enforcement branch. This approach appears have been extremely successful in bringing about a vigourous enforcement policy in that province.[44]

However, enlarging and creating new structures within the federal Department of the Environment alone will not be sufficient to address the failings of its enforcement practices. The department must also accept the clear regulatory mandate provided to it by CEPA.

5) Conclusion - A Failure of Political Will

That CEPA has fallen so short of its stated goals is simply unacceptable. The Act and the regulations promulgated under it propose to control a very short list of toxic substances, and control activities very clearly within the jurisdiction of the federal government. Yet the Department of the Environment has always been under-funded, inadequately staffed and indifferently managed by the senior bureaucracy. Enforcement of CEPA has been

infrequent and disproportionately focused on only three regulations.[45]

The situation does not suggest, as has been proposed by the "Reviewing CEPA: An Overview of the Issues" document issued by Environment Canada, that a serious problem with environmental regulation in Canada has been "overlap and duplication of effort."[46] On the contrary, the serious problem with CEPA has been the federal government's own reluctance to assert its clear constitutional authority to regulate the environment and enforce those regulations. This absence of political will and leadership has significantly contributed to all the failings noted above. The inefficacy, inefficiency, and lack of certainty that surround environmental regulation in Canada are not because of the law, but because of the failings of those people whose elected responsibility it is to see that the law is effectively implemented and enforced.

The provision more and better-trained enforcement staff, the reallocation of funds to improve information management infrastructure, the clear separation of promotional and enforcement functions branches, in themselves will not adequately address the failings of Environment Canada's enforcement practices. The underlying problems regarding the acceptance of the regulatory mandate provided by Environment Canada by CEPA, by the department's senior staff and political leadership, must also be addressed.

IV. STRENGTHENING CEPA'S ENFORCEMENT THROUGH CITIZEN INVOLVEMENT

Qui tam pro domino rege quam pro seipso[47]

1) Introduction

Citizens have participated in enforcement since the earliest beginnings of the English common law system.[48] This history is important because it shows that citizen participation in enforcement, also known as "private prosecution", is not a foreign concept to the roots of our legal system.

Enforcement of any law is an essential prerequisite to achieving the law's objectives. One need only glance at the former environmental regimes of some of the countries in Central and Eastern Europe to realize that it is not enough to have forward-looking progressive laws enacted.[49] The regulated community must know that transgressions will be discovered and prosecuted with diligence.

We have examined the enforcement experience under CEPA and found it to be lacking in vigour. Although we make several specific recommendations regarding remedies for these inadequacies, in this section we advocate for the addition of a citizen suit provision to CEPA to help ensure that CEPA's goals are met.

Understanding the evolution of citizen enforcement lends context to the debate about enhancing public participation in environmental law.[50] Initially, in thirteenth and fourteenth century England, citizen enforcement supported the government in its protection of the public interest. The public health acts of the day, analogous to present day environmental legislation, included specific reference to citizen enforcement.[51] So-called "common informers" would initiate prosecutions and were entitled to receive a share of the penalty imposed upon conviction. Such financial rewards unfortunately created the incentive for unscrupulous citizens to advance vexatious proceedings. Public outcry about this kind of harassment resulted in these types of informer actions being abolished temporarily. However, given the need for citizen enforcement to implement English penal laws, these informer actions were subsequently reintroduced with safeguards against such abuse.[52]

As the tasks associated with protecting health and welfare grew in the context of the industrial revolution, a centralized bureaucracy was assembled to administer the new and/or expanded factory, public health, and food and drug legislation in the nineteenth century. This bureaucracy soon realized the need for a "...centralized and professional inspectorate charged with the responsibility of administering and enforcing..."[53] this social welfare legislation. This increase in volume and sophistication of social legislation made it very difficult for the average citizen to conduct private prosecutions.[54]

With the advent of the regulatory offence[55] and the defence of "due diligence"[56], the private prosecutor needed to address governmental action or inaction as well as the conduct of the accused. This is because the government will often have a duty to regulate corporate environmental behaviour and may have in fact issued a permit or a control order concerning the behaviour which has given rise to the private prosecution. Compliance with any governmental permissions regarding the polluting activity will be entered as evidence of "due diligence."

Thus the citizen suit has evolved from a necessary and expected aid to government in implementing laws to a role that includes this "supplementary" function but also includes policing the government itself in its regulatory sphere.

The Attorney General has the primary responsibility for prosecutions. However, in our legal system, the Attorney-general has a potential conflict of interest as both the representative of the Crown responsible for public prosecution and as a member of Cabinet.[57] This conflict of interest is compounded by our legal tradition of delegating prosecutorial discretion to the Crown.[58] Citizens are left out of the decision-making when the Attorney-General decides whether to prosecute. This is particularly true with respect to the generally "invisible" decision not to prosecute.

Under Canadian common law, consistent with our English common law roots, there has always been the option of pursuing a private prosecution, as a supplement to the powers of the Attorney General to enforce a public crime or offence. Under the common law rules, a citizen has the right to lay a charge to bring an alleged wrong-doer to account before a

court of law. Citizens who initiate in a private prosecution may act in the place of the Attorney General in such circumstances. However, the Attorney General is always entitled to exercise her discretion to take over the prosecution, and even abandon it, leaving the citizen with no specific role to play or recourse.[59]

A "citizen suit," on the other hand, is a *civil* action in which a private party has a statutory cause of action to seek relief in the civil courts to enforce the provisions of a statute. As such, a citizen suit has some advantages over a private prosecution. In a civil suit, the emphasis is on compensation rather than deterrence. In some instances this may be a more appropriate approach. Furthermore, the consent of the Attorney General generally is not required to pursue a citizen suit. Perhaps even more importantly, the burden of proof in a citizen suit is the civil one of "on a balance of probabilities," which a lesser onus than the criminal burden of beyond a reasonable doubt.[60]

2) The U.S. Experience with "Citizen Suits"

In the United States, citizen suits have been a legislated part of environmental regulation since the *Clean Air Act* was amended in 1970.[61] This enactment of a citizen suit provision has been used as a model in almost every major environmental statute enacted in the U.S. during the last two decades.[62] These provisions permit citizens to take civil actions to seek injunctions against activities, either by private actors or government agencies, which violate the statutes in question.[63]

Civil penalties, payable to the government, are sometimes also provided for in U.S. citizen suit provisions.[64] These are designed to punish the violator, to eliminate any profit earned by the violator from the polluting activities, and to compensate for environmental caused by the polluting activity.[65] These penalties are generally reserved for the government to claim.

In addition, while in the U.S. citizens are normally entitled to intervene in government prosecutions where they can show an interest in the property or transaction at issue, most U.S. environmental statutes allowing citizen suits also grant citizens the right to intervene in government enforcement proceedings.[66] Where a case is settled, even before court proceedings are initiated[67], a citizen that has intervened becomes a party to the agreement and can participate in the settlement negotiations.

Citizen suits[68] have been recognized in the U.S. as a vital component of that country's environmental regulatory regime. Indeed, citizens are uniquely placed to act as the governments "eyes and ears" when it comes to monitoring the environment in which they live.

"Citizens are on the of the nation's greatest resources for enforcing environmental

> laws and regulations. They know the country's land and natural attributes more intimately than a government ever will. Their number makes them more pervasive than the largest government agency. And because citizens work, play, and travel in the environment, each has a personal stake in its beauty, health, and permanence. Citizens are omnipresent, motivated, and uniquely interested in environmental quality."[69]

Public involvement in enforcement is also an important component of a democratic political system that encourages public participation in the creation of environmental statutes and regulations.[70]

When citizens suits were first enacted in the United States, there was considerable opposition to the concept. Warnings of a proliferation of lawsuits that would flood already overburdened courts were put forward. Others raised concerns about the ability of governments to shape their own prosecution policies, without interference from an overzealous citizenry. This opposition shaped the first citizen suit provision in the U.S. The result was provisions that allowed citizens to sue, but only after notifying appropriate regulatory agencies and giving them the chance to sue first. In addition, citizens were only allowed to sue to redress statutory violations, but not for damages.

In practice, citizen suits have tended to occur only in cases of serious and egregious violations of environmental laws,[71] and it is generally held that citizen enforcement of environmental laws has supplemented governmental efforts which have been subject to resource constraints. Indeed, a number of U.S., government agencies have expressed their appreciation for citizen suit enforcement efforts.[72] In addition, allowing citizen suits as formal parts of environmental legislation has acted as an incentive to governments to actively enforce environmental laws, even when they may be reluctant to do so to political reasons.[73]

3) Citizen Suits and The Ontario *Environmental Bill of Rights*[74]

The new Ontario *Environmental Bill of Rights*, following the model of U.S. environmental citizen suit provisions, creates a new right for Ontario citizens to bring a law suit against an alleged polluter or other person suspected of breaking the law and causing harm to a significant public resource[75], that removes some of the obstacles to citizen participation in enforcement. Although, notice must be given to both the Attorney General and the Environmental Commissioner, under the Act[76], the Attorney General does not have the right to take over the proceeding, thereby exclude the citizen enforcer.

In order to ensure that the government has had an opportunity to investigate and decide whether to prosecute themselves, the citizen wanting to sue must first have submitted a Request for Investigation to the Environmental Commissioner and either not received a response within a reasonable time period or received an unreasonable response. Once the

citizen initiates her suit, the Attorney General is entitled to present evidence and make submissions to the court in the action, as well as to appeal the judgment and call evidence and make submissions at the appellate level.[77] Although there are many remedies available in a successful citizen suit, including an injunction and an order to develop a plan for clean-up and restoration, the citizen cannot claim monetary damages personally. Costs are awarded pursuant to the court's discretionary power[78]; however, the court may take into consideration "...any special circumstance, including whether the action is a test case or raises a novel point of law."[79]

4) Requirements for Effective Citizen Enforcement

Successful citizen participation in enforcement requires support from other elements of the environmental protection system. Citizen suits must be permitted through an explicit statutory provision. The Ontario *Environmental Bill of Rights* is one of the few Canadian environmental statutes with such a provision.[80] A second requirement is that there be clear statutory standards of conduct against which the behaviour of potential violators can be measured. Specific emission levels, and deadlines for compliance, for example present the citizen, as well as the government enforcer, with more opportunities to enforce the law.

A third prerequisite to effective citizen enforcement is a public education program to ensure that citizens know about the various options for participation. Indeed, an enlightened government could use citizen volunteers to implement a comprehensive enforcement strategy.[81]

The provision of financial incentives to encourage such participation is essential. In the U.S. only one quarter of citizen suits filed between 1984 and 1988 were brought by individual or local coalitions, while the rest were brought by national or regional environmental organizations.[82] This statistic is likely largely influenced by the prohibitive costs of environmental litigation. Subsidizing citizen environmental enforcement directly is a potentially effective form of encouragement.[83] Indirect subsidy through provision of technical assistance, such as government experts and testing facilities, is also an appropriate role for government in the context of encouraging citizen participation in enforcement. The provision of assistance of this kind could be seen as part of the federal government's duty flowing from its statutory commitment to "encourage the participation of the people of Canada in the making of decisions that affect the environment" contained in CEPA.[84]

Generous cost rules are also necessary to encourage citizen suits to be brought in the public interest, allowing the court to exercise its discretion to not award costs against a unsuccessful citizen plaintiff where the suit was a test case or raised a novel point of law.

Finally, a crucial element in the success of citizen suits in the U.S. has been access to information on pollution levels supplied by polluters themselves, as part of regulatory self-monitoring and reporting regime.[85] Examples include the discharge monitoring reports

required under the U.S. *Clean Water Act* and information available through the *Freedom of Information Act*. An enlightened government agency might also assist citizens in information-gathering by affirmatively disseminating environmental data collected in the course of its regulatory duties. An important component of the information requirements is reporting of non-compliance so that citizens can ascertain when the government has chosen to not enforce the statute in question.

5) A Citizen Suit Provision for CEPA

CEPA should be amended to permit citizen suits. This statutory recognition is necessary to overcome problems associated with private prosecution[86], such as the potential exclusion of the citizen from participation if the Attorney-General exercises his or her discretion to prosecute and/or enter a settlement with the alleged wrong-doer.

CEPA presently permits citizens to apply to the court for damages, or an injunction, where they have suffered personal loss, or will suffer personal loss, as a result of a violation of CEPA. However, the individual citizen must prove this loss or damage.[87] CEPA also permits the minister to seek an injunction against activities which are, or may lead to, a violation of CEPA, or to obtain a court order requiring that the person named in the order take action to prevent a violation of CEPA.[88]

These existing provisions should be expanded to provide a clearly articulated citizen's right to bring an civil enforcement action, subject to proof of an offence, or imminent offence, on a balance of probabilities[89] in the event of a violation or imminent violation of CEPA. Remedies available under such actions should include the granting of injunctions ordering the person named to refrain from any action that may constitute or be directed towards the commission of an offense under CEPA, or to do anything necessary to prevent the commission of an offence under CEPA.[90] In the event that CEPA has been contravened, the person named in an application might be required to develop and implement a restoration plan to repair any damage caused to the environment in the course of the violation of CEPA.[91] Consideration should be given to allowing citizens to share in penalties levied against the wrong-doer upon conviction as well.[92]

The citizen suit provision should require notice to the Attorney General prior to initiation of the suit. However, where the Crown decides to pursue the case, the citizen, or citizens' group, should be entitled to remain a party to the prosecution. Where the Attorney-General settles the case without formal legal proceedings, the citizen should be entitled to participate in the settlement negotiations and permitted to become a party to any agreement signed.

The court's discretion regarding cost awards in citizen suit actions should be specifically stipulated to include considerations of whether the case is a test case or raises a novel point of law. Interim cost award should be made explicitly available under the citizen suit provision. In addition, a fund for providing enforcement costs to citizen enforcers should be

created.[93]

The information dissemination provisions of CEPA should be reviewed to ensure that they encourage citizen participation in enforcement. The possibility of including voluntary citizen enforcers in their enforcement strategies should be considered. At a minimum, citizens should have access to monitoring information, and information regarding non-compliance, and decisions by the Attorney General not to prosecute.

Finally, in the Canadian federal context, the importance of clear standards under any delegation agreement cannot be overstated. Where equivalency agreements are permitted under CEPA, it should be made clear that the test for equivalency includes the provision of citizen suits under the "equivalent" provincial law.[94]

V. CONCLUSIONS AND RECOMMENDATIONS

There is no question but that Environment Canada's enforcement practices regarding CEPA require reform. Nor is there any question but that reform must not only address the past failings of government action under CEPA, but must also address the imperatives of sustainable development and pollution prevention.

RECOMMENDATIONS

1) Environment Canada's Departmental Mandate

The Department of the Environment must accept the regulatory mandate provided to it by CEPA. The Department can no longer limit itself to an "advisory" and "promotional" role. CEPA provides the department with clear direction to provide for the life-cycle regulation of toxic substances in Canada and a number of additional regulatory functions. The department must accept and operationalize these regulatory functions as part of its institutional mindset and core administrative policies. In the context of CEPA, Environment Canada's mandate must now be recognized as being two-fold:

1) to provide information clearly, and in a timely fashion to regulated industries; and

2) to enforce compliance with the requirements of the legislation when it is necessary to do so.

This regulatory mandate should be affirmed by the Standing Committee on Environment and Sustainable Development and by the government as a whole.

2)Departmental Restructuring

In order to operationalize this regulatory mandate Environment Canada's enforcement functions should be restructured. In particular:

* *following the model of the Ontario Ministry of Environment and Energy, information and promotion, and enforcement functions should be clearly separated;*

* *the need for Environment Canada to obtain permission from the Department of Justice to undertake prosecutions should be eliminated; rather prosecutions should be handled by Environment Canada's own legal services branch, as is the case with the Ontario Ministry of Environment and Energy; and*

* *investigative and legal services staff should be given greater authority to decide when to prosecute.*

3) Sanctions and Enforcement Powers

i) Sanctions

The quasi-criminal sanctions currently contained in CEPA[95] should be retained. The presence of these sanctions in the Act underline the value of respect for the environment itself and stigmatize behaviour causing serious damage to the environment.

ii) Enforcement Powers

Consistent with the affirmation of Environment Canada's regulatory mandate through CEPA, inspectors' powers under CEPA[96] should be expanded to include:

* *the authority to issue "cease and desist" or "stop" orders to oblige a regulated party to stop an illegal activity, without the requirement for formal court action;*

* *the authority to issue preventative orders to require regulated parties to take preventative or corrective action before a violation actually occurs;*

* *the authority to require regulated parties to report on how they have complied with "cease and desist" or "stop" orders or preventative orders;*

* *the authority to gain entry where an owner refuses consent; and*

* *the right to serve subpoenas and summons in accordance with s.509(2) and s.701(1) of the Criminal Code.*

4) Citizen Suits

CEPA should be amended to permit citizen suits to ensure that the requirements of CEPA and any regulations made under the Act are met. A separate provision should be included in CEPA with the following features:

* *a clear articulation of any person's right to bring an enforcement action, subject to proof of an offence, or imminent offence, on a balance of probabilities;*

* *provide for the granting of injunctions ordering the person named in such actions to refrain from any action that may constitute or be directed towards the commission of an offence under CEPA, or to do anything necessary to prevent the commission of an offence under CEPA;*

* *where CEPA has been contravened, the person named in an application can be required to develop and implement a restoration plan to repair any damage caused to the environment in the course of the violation of CEPA;*

* *permits citizens to share in penalties levied against the wrong-doer upon conviction;*

* *in the event that the Attorney-General decides to pursue the case, the citizen, or citizens' group, should be entitled to remain a party to the prosecution;*

* *in the event that the Attorney General settles the case without formal legal proceedings, the citizen should be entitled to participate in the settlement negotiations and should be entitled to become a party to any agreement signed;*

* *specifically stipulate that the court consider whether the case is a test case or raises a novel point of law, in making cost awards in relation to citizen suit actions;*

* *makes available interim cost awards to citizen enforcers;*

* *creates a fund to assist citizen enforcement actions; and*

* *requires that where equivalency agreements are permitted under CEPA, the test for equivalency include the provision of citizen suits under the "equivalent" provincial law.*

ENDNOTES

1. J. William Futrell, "Law of Sustainable Development" (March/April, 1994) 11 The Environmental Forum p.21.

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3. Richard Brown and Murray Rankin, "Persuasion, Penalties, and Prosecution: Administrative v. Criminal Sanctions" in M. Freidland (ed.) Securing Compliance (Toronto: University of Toronto Press, 1990) p.325.

4. Eugene E. Kupchanko, "A Case For Compliance Through Administration of Licenses and Permits" in Linda F. Duncan (ed.) Environmental Enforcement (Edmonton: Environmental law Centre, 1985) at 8.

5. David Estrin, "A Response" in Linda F. Duncan (ed.) Environmental Enforcement, p.15.

6. See, among others, Eugene E. Kupchanko, "A Case For Compliance Through Administration of Licenses and Permits" and Nicholas Gwyn "Structuring Administrative Discretion: Making Compliance Systems Fairer, More Effective and Less Costly" in Linda F. Duncan (ed.) Environmental Enforcement, pp.8 and 18.

7. See John Z. Swaigen "A Case for Strict Enforcement of Environmental Statutes" in Linda F. Duncan (ed.) Environmental Enforcement, p.2.

8. "Recent polling data indicate that most of the public support the need for strict environmental regulation." See Resource Futures International, Evaluating CEPA, p. 78.

9. See, among others, K. Webb, Pollution Control in Canada: The Regulatory Approach in the 1980's (Ottawa: Law Reform Commission of Canada, 1988) and, generally, M. Friedland (ed.), Securing Compliance (Toronto: University of Toronto Press, 1990).

10. The sanctions provided for under CEPA are, some argue, technically not criminal sanctions:

> "...section 115...is linked to contravention of the Act. These are thus regulatory, rather than essentially criminal offenses..."

from Alastair R. Lucas, "Jurisdictional Disputes: Is

"Equivalency" a Workable Solution?" in Donna Tingley (ed.) Into The Future: Environmental Law and Policy for the 1990's (Edmonton: Environmental Law Centre, 1990) at 30. Whether or not the provisions fall entirely into the criminal law power of the federal government, the expression of societal approbation is still clear, and still necessary.

11. Law Reform Commission of Canada. Recodifying Criminal Law (Ottawa: Law Reform Commission of Canada, 1987) p.95.

12. Ibid., p. 93.

13. K.Clark and B.Rutherford, "Constitution, Federal-Provincial Relations, Harmonization, and CEPA," in M.Winfield, ed., Reforming CEPA: A Submission to the Standing Committee on Environment and Sustainable Development (Toronto: Canadian Institute for Environmental Law and Policy, 1994).

14. The exact words in the "Issues Overview" document are:

> "In addressing [the issue of sustainable development], several factors should be kept in mind. It is well recognized that sustainable development cannot be promoted entirely by one level of government, or through a single piece of legislation or other instrument. (Reviewing CEPA: An Overview of the Issues, at 6)

This statement suggests that the body that has "well recognized" these conclusions is the federal government, and that the "single piece of legislation" that cannot promote sustainable development all by itself is CEPA.

15. All of the figures cited in the following discussion are taken from Environment Canada, "Office of Enforcement Legal Activities (CEPA and the Fisheries Act)", May, 1994.

16.Canada Gazette, Part I, 13 May, 1993, EXTRA No. 3, Vol. 127 Gasoline Regulations -- Amendment. The nature of the amendment to the Gasoline Regulations will be to explicitly state the non-applicability of the regulations to aircraft and competition vehicles.

17. The regulations under CEPA are:

Replacing Previous Regulations under the Clean Air Act:

1. Secondary Lead Smelter Release Regulations; SOR/91-155 (Gaz. 13/3/91, p. 1043).
2. Vinyl Chloride Release Regulations, 1992; SOR/92-631 (Gaz. 2/12/92, p. 4512).
3. Chlor-Alkali Mercury Release Regulations; SOR/90-130 (Gaz. 28/2/90, p. 790) ss. 3(1)-(3), 4, 7; Scheds. I-III: am.

SOR/93-231 (Gaz. 2/6/93, p. 2420).

4. Asbestos Mines and Mills Release Regulations; SOR/90-341 (Gaz. 4/7/90, p. 2442) s. 3(1); Scheds. I,II: am. SOR/93-231 (Gaz. 2/6/93, p. 2420).
5. Gasoline Regulations (replacing 2 previous regulations); SOR/90-247 (Gaz. 9/5/90, p. 1700) Sched.: am. SOR/92-587 (Gaz. 21/10/92, p. 4094).
6. Fuels Information Regulations, No. 1; (C.R.C. 1978, c. 407) ss. 4(1), 5(1); Sched. Form 1 items 2(a), 7-8(new); Sched. form 2 ss. 3,4: am. SOR/79-280 (Gaz. 11/4/79, p. 1175).

Replacing Previous Regulations under the Environmental Contaminants Act

7. Chlorobiphenyl Regulations (replacing 3 previous regulations); SOR/91-152 (Gaz. 13/3/91, p. 1030).
8. Polybrominated Biphenyl Regulations, 1989; SOR/90-129 (Gaz. 28/2/90, p. 787).
9. Polychlorinated Terphenyls Regulations, 1989; SOR/90-128 (Gaz. 28/2/90, p. 784).
10. Mirex Regulations, 1989; SOR/90-126 (Gaz. 28/2/90, p. 778).

Replacing Previous Regulations Under the Canada Water Act

11. Phosphorous Concentration Regulations; SOR/89-501 (Gaz. 8/11/89, p. 4510).

Replacing Previous Regulations under the Ocean Dumping Control Act

12. Ocean Dumping Regulations, 1988; SOR/89-500 (Gaz. 8/11/89, p. 4490) ss. 3,4, 4(g)(iii), 4(1), 5, 6; Sched.: am. SOR/93-433 (Gaz. 8/9/93, p. 3621).

New Regulations

13. Contaminated Fuel Regulations; SOR/91-486 (Gaz. 28/8/91, p. 2538).
14. Export and Import of Hazardous Wastes Regulations; SOR/92-637 (Gaz. 2/12/92, p. 4553).
15. Federal Mobile PCB Treatment and Destruction Regulations; SOR/90-5 (Gaz. 3/1/90, p. 20).
16. Gasoline Regulations; SOR/90-247 (Gaz. 9/5/90, p. 1700) Sched.: am. SOR/92-587 (Gaz. 21/10/92, p. 4094).
17- Ozone-depleting Substances Regulations No.1,2,3 and 4.
20. No. 1; SOR/89-351 (Gaz. 19/7/89, p. 3425).
No. 2; SOR/90-583 (Gaz. 12/9/90, p. 3735).
No. 3; SOR/90-584 (Gaz. 12/9/90, p. 3720).
No. 4; SOR/93-214 (Gaz. 19/5/93, p. 2243).
21. Pulp and Paper Mill Defoamer and Wood Chip Regulations; SOR/92-268 (Gaz. 20/5/92, p. 1955).
22. Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations; SOR/92-267 (Gaz. 20/5/92, p. 1940).
23. Storage of PCB Material Regulations; SOR/92-507 (Gaz. 9/9/92, p. 3566).
24. Toxic Substances Export Notification Regulations; SOR/92-634 (Gaz. 2/12/92, p. 4533).

18. Another factor may be the annual National Inspection Plan, a confidential document that targets industries that, on the basis of data received from regulated companies, present the most serious problems to the environment. The Plan is kept confidential in order not to "tip off" bad actor corporations. One might also guess that it is kept confidential so that the corporations not on the list will not be "tipped off" that they may be enjoying a regulation holiday that year.

19. Tom Conway, "Taking Stock of the Traditional Regulatory Approach" in G. Bruce Doern (ed.) Getting it Green: Case Studies in Canadian Environmental Regulation (Toronto: C.D. Howe Institute, 1990) p.37.

20. Ted Schrecker, "Of Invisible Beasts and the Public Interest: Environmental Cases and the Judicial System" in Robert Boardman (ed.) Canadian Environmental Policy: Ecosystems, Politics and Process (Toronto: Oxford University Press, 1992) p.91.

21. George Hoberg, "Environmental Policy: Alternative Styles" in Michael M. Atkinson (ed.) Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993) p.315.

22. These quotations are cited in Toby Vigod and Rick Lindgren, "Overview of Federal Law, Regulation and Policy: A paper presented to the Canadian Institute two day course on Environmental Law and Regulation in Ontario", (Toronto: Canadian Environmental Law Association, 1994) p.2.

23. Cited in Resources Futures International, Evaluating CEPA, p.77.

24. See Vigod and Lindgren, Overview of Federal Law, Regulation and Policy, p.27.

25. A recent article in the Ottawa Citizen ("Environmentalists decry lack of charges for pollution offenses", July 18, 1994, p. A3) makes news of the fact that the federal Department of the Environment does not prosecute and convict polluters in the same way as the Ontario Ministry of Environment and Energy. A Ministry official, Paul Cuillerier, is quoted as saying that the primary role the federal government plays in environmental regulation is: "[not] directed at suspected pollution cases. It's focused instead on the storage of PCBs." See also Tom Conway, "Taking Stock of the Traditional Regulatory Approach."

26. Resource Futures International, Evaluation of CEPA, p.80.

27.See Clark and Rutherford, "The Constitution, Federal-Provincial Relations and CEPA."

28. See, for example, Tom Conway, "Taking Stock of the Traditional Regulatory Approach," p.25.

29. Conway, "Taking Stock of the Regulatory Approach," pp.34-35.

30. This number was provided during a confidential interview with a Department of the Environment official. It should be noted that, in its appendix to its report, RFI indicates that there are a total of 132 inspectors, and a total of 20 investigators working in the five regions (Appendix, p. c-15). However, there are also discrepancies between the information RFI cites regarding prosecutions, and the Department of the Environment's own Prosecution and Enforcement Report. Why the information is inconsistent is unknown.

31. Resource Futures International, Evaluating CEPA p.84.

32. Ibid, p.84.

33. Mark Winfield, "The Federal Department of the Environment as a Test Case," unpublished manuscript, 1991, at 6. Document on file with the Canadian Institute of Environmental Law and Policy, Toronto, Ontario.

34. "The new agency was based principally upon the existing Department of Fisheries and Forestry. However, a number of elements were added from other agencies. The Canadian Meteorological Service was transferred from the Department of transport, as were the Air Pollution Control Division form the Department of National Health and Welfare, the Canadian Wildlife Service from the Department of Indian and Northern Development, the Canadian Land Inventory from the Department of Regional Economic Expansion, and the water related branches of the Department of Energy, Mines and Resources." Mark Winfield, "The Federal Department of the Environment as a Test Case," p.5.

35. Ibid, p.9.

36. Ibid, p.10.

37. "The Department of the Environment did envision for itself a significant responsibility in the control of the environmental impacts of major new development projects. Despite this aim, the limitations to Environment Canada's capacity to assert a meaningful coordination and review role beyond its information function were particularly evident in the structure of the Federal Environmental Assessment Review Process...The procedure was to apply to programs and projects initiated by federal departments and undertakings for which federal funds were sought, which involved federal property or for which there were possible federal regulatory considerations. However, it would be the task of the "initiating" department or the department with the

principal funding or regulatory interest, rather than the Department of the Environment, to make a preliminary review of an undertaking and decide if its impacts were significant enough to warrant an environmental assessment review." Ibid, p. 7.

38. Ibid, p. 14.

39. Ibid, p. 17.

40. Resource Futures International, Evaluating CEPA, p.80.

41. Confidential interview.

42. Confidential interview.

43. Resource Futures International, Evaluating CEPA, p.78.

44. See Environmental Prosecutions in Ontario various editions, 1991-1994, (Toronto: Ontario Ministry of Environment and Energy).

45. The Ozone-Depleting Substances, Ocean Dumping and PCB Storage Regulations are the most often enforced. See discussion above, under "Reviewing the Record."

46. Environment Canada. Reviewing CEPA: An Overview of the Issues, 1994, p.9.

47. Latin for "he who as much for the King as for himself;" the special means in the thirteenth century of bringing a citizen enforcement of penal offenses.

48. See Note, "The History and Development of Qui Tam" (1972) Wash. Univ. L. Qtly 81; cited in Kernaghan Webb, "Taking Matters into Their Own Hands," 36 McGill L. J. 770, p.789.

49. See Bowman & Hunter, "Environmental Reforms in Post-Communist Central Europe: From High Hopes to Hard Reality", 13 Michigan J. Int'l L. 301, 351.

50. See Webb, "Taking Matters into Their Own Hands."

51. Ibid., p.791.

52. Ibid.

53. Ibid.

54. Another barrier to citizen participation was the courts' establishment, by the nineteenth century, of the necessity to prove guilt in all penal cases. Proving malicious intent on the behalf of corporate defendants presented then, as it still does today, a formidable obstacle to any prosecutor, private or

public. See Webb, "Taking Matters into their Own Hands," pp.791-780.

55. The phrase "regulatory offence" refers to the body of public welfare offenses that do not require proof of "mens rea," or intent, to obtain conviction. See R. v. City of Sault Ste. Marie (1977) , [1978] 2 S.C.R. 1299, 40 C.C.C. (2d) 353.

56. The phrase "due diligence" refers to the reverse onus on an accused to show, once their wrong-doing has been proven beyond a reasonable doubt, that what they did to avoid the wrong-doing was reasonable in the circumstances.

57. See Webb, "Taking Matters into their own hands," p.783.

58. "Unlike some other Western legal systems [such as in Germany] Canada follows the English lead in not subjecting government enforcement authorities... to a general duty to prosecute for all cases which come to their attention." Webb, "Taking Matters into their own hands," pp.817-818; citing Glanville Williams, "Discretion in Prosecuting" (1956) Crim. L. Rev. 222, at p.222.

59. See generally, P. Burns, "Private Prosecutions in Canada: the Law and a Proposal for Change" McGill Law Journal 21 (1975), p.269.

60.There is however, a significant potential disadvantage with the pursuit of a citizen suit in Canada, as under the costs rules for civil actions, an award of costs can be made against an unsuccessful plaintiff. These rule do not apply in quasi-criminal proceedings, such as private prosecutions.

61. See 42 U.S.C. Section 7604 (1982).

62. Steven M. Dunne, "Attorney's Fees for Citizen Enforcement of Environmental Statutes: The Obstacles for Public Interest Law Firms" 9 Stanford Environmental Law Journal 1, at p.1. The single major exception is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. Sections 135-136y (1982). Two recent examples are citizen suit provisions included in the 1984 amendments to the Resource Conservation and Recovery Act (RCRA) and in the 1986 Superfund Amendments and Reauthorization Act (SARA); see 42 U.S.C. Sections 6972, 9659 (1982 & Supp. V 1987). Citizen suits are not unique to U.S. federal environmental legislation; they can be found in recent legislation protecting consumer and other social interests. See Jeffrey G. Miller and the Environmental Law Institute (ELI), Citizen Suits: Private Enforcement of Federal Pollution Control Laws, (Washington, D.C.; 1987)

63. See Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, 484 U.S. 49 (1987).

64. See the Clean Water Act, s.505(a); the Resource Conservation and Recovery Act, s. 7002(a); and the Clean Air Act, s.304(a). In one successful citizen suit brought to enforce a waste-water treatment plant's permits, the appellate court found that the trial court's civil penalty award of $3.2 million was too low. The court instructed the lower court to reassess the penalty, suggesting the statutory maximum of $4.2 million was more appropriate under the circumstances. See Public Interest Research Group of New Jersey v. Powell Duffyn Terminals, Inc., 720 F. Supp. 1158 (D,N,J, 1989), aff'd in part and rev'd in part, 913 F.2d 64 (3d Cir. 1990).

65. Under the Clean Air Act (S.304(g)(2)), judges may assign up to $100,000 of these penalties to a fund which will be used for "beneficial mitigation projects which are consistent with the Clean Air Act."

66. See M. Axline, Environmental Citizen Suits, s.503, at 5-3 & n.5 (1991).

67. Such settlements are called "consent decrees" in the U.S.

68. It is important to understand that such suits are civil actions requiring proof only a "balance of probabilities" only; while explicitly preserving anyone's right to commence a private prosecution for non-compliance of the Act, including requesting relief against an administrator or State agency. See Clean Air Act, s. 304.

69. ELI Working Paper, The Role of the Citizen in Environmental Enforcement (Washington D.C.; August 1992; A Working Paper prepared under the auspices of the Environmental Law Institute's Environmental Program for Central and Eastern Europe.), p.1.

70. Many other countries besides the U.S. allow public participation in the enforcement of environmental laws. See Preston, "Public Enforcement of Environmental Laws in Australia," 6 J. Envt'l. L. & Litigation 39 (1991); Webb "Taking matters into their own hands," p.770; Participation and Litigation Rights of Environmental Associations in Europe (M. Fuhr & G. Roller eds. 1991)

71. The 1970 Michigan Environmental Protection Act (MEPA) was the first state statute in the U.S. to expressly authorize citizen suits. From 1972 to 1983, only 183 cases were brought. For further discussion see Paul Muldoon, "The Fight for an Environmental Bill of Rights," Alternatives Vol. 15, No.2 1988.

72. See Chesapeake Bay Foundation v. Bethlehem Steel Co., 652 F. Supp. 620, 625 (D. Md. 1987) citing Brief of the U.S. as amicus curiae in support of the Clean Water Act at 1-2; Student Public Interest Research Group v. Monsanto, 600 F.Supp. 1474 (D,N,J, 1985) indicating that the EPA Administrator enthusiastically supported the role of citizens in enforcement proceedings; and Price, "Private Enforcement of the Clean Water Act," 1 Nat. Resources & Environment 31, at p. 60 (1986).

73. See Webb, "Taking Matters into Their Own Hands," p.819.

74.For a detailed discussion of the Ontario Environmental Bill of Rights see G.Crann, G.Ford, and M.Winfield, Achieving the Holy Grail? A Legal and Political Analysis of the Ontario Environmental Bill of Rights (Toronto: Canadian Institute for Environmental Law and Policy, forthcoming).

75. Note that where the citizen alleges that a law is broken, this suit is equivalent to a private prosecution, whereas the allegation of harm to a public resource would not necessarily involve a prosecution under a particular statute.

76.Ontario Environmental Bill of Rights, s.78 and 86(1).

77.Ibid., s.86(2).

78. According to the Courts of Justice Act (s.141(1)).

79.Ontario Environmental Bill of Rights, s.100. The Ontario Rules of Civil Procedure also allow the courts discretion to award costs against or for a party depending on a number of factors, including the complexity of the proceeding and the importance of the issues (R.57.01(1)(c) and (d)). Although the general rule is that the successful party is entitled to their costs, the fact that a party is successful in a proceeding or a step in a proceeding does not prevent the court from awarding costs against a party in a proper case (R.57.01(2)).

80.Other examples include the Quebec Environmental Quality Act, the Northwest Territories Environment Rights Act, and the Yukon Environment Act.

81. Such an enlightened strategy would prevent potential conflicts from piecemeal enforcement efforts and help the government meet its enforcement objectives.

82. ELI, The Role of the Citizen in Environmental Enforcement, p.35, n.96; citing Greve, "The Private Enforcement of Environmental Law," 65 Tul.L.Rev. 339, 352-53 (1990).

83. A territory in Australia has employed this method of encouragement; see Preston, "Public Enforcement of Environmental Laws in Australia," 6 J. Envtl. L. & Litig. 39 (1991).

84. CEPA, s.2(d); see Webb, "Taking matters into their own hands," p.826.

85. ELI, The Role of the Citizen, p.36 and n.100.

86. Webb suggests that private prosecutions result from distrust of government and inadequate information about the government's enforcement policy. At the very least, if the government does not amend CEPA to include a citizen suit provision, the CEPA Compliance and Enforcement Policy should be amended to reflect the government's policies in respect of private prosecutions. See Webb, pp. 826-828, wherein he suggests that the following be included in such a policy: (1) when will the government decide not to prosecute; (2) what information will be supplied about a decision not to prosecute; (3) how will the AG treat private prosecutions; (4) what ongoing compliance or non-compliance reports should be regularly published; (5) what further information will be made available to the public; (6) will government officials conduct samples supplied to citizens?; (7) what technical assistance will be provided to private prosecutors? and (8) what financial assistance will be provided to private prosecutors? See also Web's specific suggestions for additions to CEPA's "flawed" Enforcement and Compliance Policy along the same lines as just noted. (p.830)

87. CEPA, s.136.

88.CEPA, s.135.

89. See Ontario's Environmental Bill of Rights, s. 84 and the U.S. Clean Air Act, s.304, for examples.

90.This proposal is based on the application for an injunction in such circumstances currently available to the minister. See CEPA s.135.

91.This would follow the provisions of the Ontario Environmental Bill of Rights in this regard. See Ontario EBR, s.95.

92. There is a Canadian precedent in the Fisheries Act Forfeitures Regulations.

93. Models for funding to be considered should be the Australian example given, as well as the Canadian examples of the Intervenor Funding Project Act, funding under the Canadian Environmental Assessment Act and the former Canadian Charter of Rights and freedoms Court Challenges Program.

94. See discussion in Webb, "Taking Matters into their own hands," pp. 820, and 829-830.

95.CEPA, ss.111-115.

96.Currently sections 100-110 of CEPA.

CEPA AND ECONOMIC INSTRUMENTS

Issues for the Five Year Review of the Canadian Environmental Protection Act

by

Barbara Rutherford, B.A., LL.B.
Research Associate

and

Mark S. Winfield, Ph.D.
Director of Research
for the
CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY

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CEPA AND ECONOMIC INSTRUMENTS

I. INTRODUCTION

As our understanding of the underlying economic and political causes of environmental degradation increases, it has become apparent that it is necessary to expand the range of tools which we employ to protect the integrity of the environment. In this context, "economic" policy instruments, such as the imposition of taxes on environmentally harmful activities, and the creation of markets for permits to emit pollutants, have attracted growing interest over the past few years.[1] This paper will analyze these instruments with respect to their relevance to the Standing Committee on the Environment and Sustainable Development's review of the *Canadian Environmental Protection Act* (CEPA).

Economic instruments have been incorrectly touted both as "voluntary" mechanisms and as enforcement tools.[2] Economic instruments, such as environmental taxes and tradeable permits, are defined, for the purposes of this discussion, as those instruments having the potential to alter behaviour by providing monetary incentives to reduce and/or eliminate the creation and discharge of contaminants. Economic incentives, such as subsidies, can also alter behaviour, yet they do so through encouragement, rather than as a parts of a regulatory system.

There are several critical prerequisites for a successful regulatory regime which includes the use of economic instruments. The first requirement is a discharge monitoring system that allows both the firm and the regulators to measure accurately total discharges and any reduction in discharges for the purposes of approving a trade or levying a tax. Secondly, clearly enforceable environmental quality standards must be established to serve as baselines for a minimum level of environmental quality that have to be met at all times. These points highlight one of the fundamental obstacles to the use of tradeable permits and discharges fees under CEPA: the general paucity of permitting provisions in the Act.

II. INPUT AND OUTPUT FEES AND CHARGES

1) Theoretical Basis

In general the use of fees and charges for environmental purposes can take three forms:

i) charges against a firm based on the amounts of pollutant discharges from the firm to the air, land or water;

ii) charges levied on feedstocks used by a firm in its productive process;

iii) charges levied on final products whose production, use or disposal is associated with high environmental costs.

Levying a fee or tax on emissions, or for the use of particular inputs, provides a disincentive to emit or use the substance being taxed. The theoretical basis for a fee or tax mechanism is that firms will reduce their discharges or use of the targeted substance up to the point where the marginal cost of another unit of reduction equals or exceeds the charge levied by the government. A fee set high enough to encourage the reduction of discharges would act as a catalyst for the implementation of technological changes to prevent the pollution. Similarly, an appropriate level of tax on the use of a substance in production would encourage the development of pollution prevention technologies to eliminate the use of the substance.[3]

2) Use in Canada and Other Industrialized Jurisdictions

Input and output fees are widely employed instruments in the United States and many European jurisdictions. In the U.S., taxes on the use of particular chemical feedstocks are employed to support the federal Superfund program created through the *Comprehensive Environmental Response, Compensation and Liability Act* of 1980, and state superfund, toxic use reduction, and pollution prevention programs, in at least 26 states.[4] Several states also currently charge fees under the *Clean Water Act* permitting system.[5] Within Europe, Germany has developed an extensive system of charges related to discharges to water and the generation of hazardous wastes.[6]

In Canada waste discharge fees are presently levied by the federal government under the ocean dumping control part of CEPA.[7] In addition, fees are levied by British Columbia under its *Waste Management Act*.[8] The Ontario government charges a permit fee for Certificates of Approval issued under the *Environmental Protection Act*. The 1993 report of the Ontario Fair Tax Commission recommended that Ontario establish a system of pollution taxes on the discharge of a range of substances selected from generally recognized pollutants, such as those covered by the National Pollutant Release Inventory.[9]

3) Fees and the Federal Government

Although the Constitution grants the federal government the power to raise revenue by "any mode or system of taxation,"[10] the federal government's capacity to apply charges of this nature is not unlimited. In particular, the federal government cannot use its taxation power to undermine valid provincial regulatory systems, such as permitting systems for discharges into the environment.[11] However, The federal government would appear to have the jurisdictional capacity to be secure in applying charges for the discharge or use of substances which are found to be "toxic" for the purposes of CEPA.[12] Other taxes, such as a generic discharge fee, may be constitutionally harder to justify, particularly where such fees interfere

with provincial environmental regulatory systems.

Input vs. Output Fees

In addition to their potential to be found constitutionally invalid as a result of interference with provincial regulatory systems, discharge fees suffer from a number of additional disadvantages from a federal perspective. Among the most significant is the absence of a federal permitting system for discharges of pollutants into the environment, except for ocean dumping, for which fees are already charged. Consequently, the federal government does not have information on discharges necessary to set and administer fees readily available. The provinces would have to be asked to provide the necessary data.

Furthermore, although the federal government has authority to impose discharge fees with respect to "toxic" substances, the provinces regard the regulation of specific discharges to the environment as being under their jurisdiction and, as noted earlier, several have already, or are considering, imposing such charges themselves. As a result, federal action in this regard would have the potential to engender significant federal-provincial conflict.[13]

The levying of fees on the use, import, manufacturing, processing or export of "CEPA toxic" substances by the federal government would, on the other hand, be an attractive option for a number of reasons. Such an approach would be highly consistent with the theme of pollution prevention through toxics use reduction, as charges could be employed to discourage the production or use of "toxic" chemicals. In addition, the application of fees on the manufacturing, processing or use of "toxic" substances has a strong appeal as a point of federal intervention, as attempts by provinces to impose such fees would run a very high risk of being characterized as indirect taxation, and therefore constitutionally invalid. Such charges would also be less likely to be construed as interfering with provincial regulatory systems governing discharges into the environment.

4) The Use of Revenues Generated by Charges on "CEPA Toxic" Substances

In the event that the imposition of charges on the use, manufacturing or processing of "CEPA toxic" substances were to be authorized through amendments to CEPA, the question arises as to the use of any funds generated. In this context, the issue of financing the clean-up of contaminated land, where the parties responsible cannot be ascertained, or are impecunious, has been the subject of much debate in Canada. It has been estimated that there are approximately 10,000 active and inactive waste disposal sites in Canada and another 20,000 that may have been contaminated by underground gasoline storage, industrial operations or accidental spills.[14] What proportion of these are "orphan sites" (meaning that liability cannot be assigned) is unclear.

Under the auspices of the Canadian Council of Ministers of the Environment (CCME), the

federal and provincial governments announced a National Contaminated Sites Remediation Program (NCSRP) in October 1989. The program was designed in part to finance the clean-up of orphan sites. Shared provincial and federal funding totalling $200 million was designated over a five year period ending March 31, 1995 for this purpose.

As the original mandate of the NCSRP comes to an end, the federal and provincial governments must examine the choices available for funding future orphan site remediation. The CCME secretariat currently estimates a need for an annual expenditure of $30 to $50 million for the ongoing remediation of orphaned sites for some time to come.[15] Two options for meeting this requirement exist: continued funding out of general revenues; or finding a new source of revenue. The continued use of existing general revenue, given the current fiscal situation of Canadian governments would result in increased levels of public debt, or require the reallocation of funds from other programs. This would also set an undesirable precedent for the socialization of major future environmental liabilities.

The funding of further federal contributions to the NCSRP through the use of the revenues generated by the imposition of charges on the use, manufacturing or processing of "CEPA toxic" substances would avoid these problems. At the same time, such an approach would provide incentives to prevent future pollution through the reduction of the manufacturing and use of toxic substances. Some of the revenues generated by the "CEPA toxic" substance charges could also be employed to support the development and diffusion of skills and technologies in the area of pollution prevention in Canada.

III. TRADEABLE PERMITS

Tradeable permits are another economic instrument that can be used in conjunction with traditional command and control regulation to promote pollution prevention. However, these instruments suffer from a number of serious problems in terms of the practicality of their implementation by the federal government.

1) Theoretical Basis

In an emission trading system, the government would determine what level of pollution is allowed and then allocate the permission to discharge this pollution amongst regulated firms through units such as "permits," "credits," or "allowances." A firm may not exceed its permitted level of emissions. However, if a firm is able to reduce its emissions below its permitted level, it can sell the reduction to another firm, so that firm can increase its emissions. A firm can also save its emission reduction credits for future use.

In order to effect the economic gains from the creation of a market, there must be competition.[16] This means many buyers and sellers are needed so that one seller or buyer cannot affect the price of the permits. Second, transaction costs should be kept to a

minimum so that trading can be as smooth as possible.[17]

Neoclassical economic theory posits that, under these circumstances, tradeable permits will net a guaranteed level of environmental quality at the least cost to the regulated community. In practice, however, for reasons outlined in the following discussion, these theoretical efficiency gains may not adequately compensate for the increased administrative costs of a tradeable permits system properly designed would ensure improvements in environmental quality.

2) Rights to Pollute?

One of the major concerns which have been identified regarding emissions trading systems is their underlying assumption that market mechanisms, particularly the establishment of proprietary rights to use environmental resources, must be extended to the environment in order to protect it from abuse.[18] Trading systems have, consequently, been criticized as a form of "privatization" of the environment.

This objection is more than theoretical. If permits were interpreted as creating property rights to pollute, the result could be tremendous regulatory problems for governments in the form of legal challenges to changes in the permit systems, as well as the potential for the requirement of compensation for the revocation of permits. In order to forestall this problem, any permit system must be enacted with the proviso that the permits are licenses revocable at the pleasure of the Crown.

3) Experience in Other Industrialized Jurisdictions

Tradeable permits have only been used in the United States. The phase down of lead in gasoline was, for example, implemented through an allowance trading system. In addition, air emissions trading has been part of the U.S. regulatory regime since the mid-1970s under the *Clean Air Act*. Recent amendments to this Act created a new trading system for sulphur dioxide (SO2) emissions from utility plants.[19]

4) System Requirements

The U.S. experiences offer important lessons about the minimum regulatory framework necessary for an environmentally effective tradeable permits system. First, the emissions being traded must be easily measurable and there must be a measurement system in place that is accurate and reliable. The acid rain trading program involves a finite number of utilities which emit measurable levels of SO2 from their smokestacks. A continuous emissions monitoring system has been developed, which it is claimed can track emissions with a high degree of precision.[20] It has been stated that "without this continuous

monitoring technology, the program would fail."[21]

5) The Problem of "Local Loading"

A further major problem which has been identified regarding trading programs is their the potential to cause a phenomenon called "local loading." Under perfect free market conditions, build up of localized pollutants could occur based upon the different marginal costs of compliance faced by each firm. The U.S. acid rain program is designed to avoid this problem by mandating health-based ambient SO2 standards which prevent any one utility from emitting unhealthy levels of SO2. However, this control mechanism would not work with pollutants that have strong localized effects, such as toxic substances. Consequently, such substances are generally not regarded as suitable subjects for emissions trading programs.[22]

6) The Allocation of Permits

The initial allocation of tradeable permits is very important from a number of perspectives. If the total amount of emissions permitted is too high, the environmental quality will suffer as a result. In order to encourage pollution prevention, the total emissions permitted should be set at a decreasing rate over time. The U.S. acid rain program, for example, involves a lowered cap on total SO2 emissions each year. This is intended to ensure actual reductions in acid rain.

The creation of a market also has important distributional effects. By allocating to firms the right to emit x tons of a pollutant, the government is creating wealth and distributing it to the firms. The initial allocation, if based upon current emissions, will create a bias towards polluting industries[23], as they would be provided them with a windfall on the basis of their present pollution prevention efforts.

In order to be compatible with a pollution prevention approach, the initial allocation, if based upon historic emissions, should be less than the historic emissions levels,[24] as well as being based upon standards achievable through best available control technology. Actual permitted emissions under the trading scheme should then result in an improvement of the environmental quality. At the very least legislation would have to specifically provide that the total amounts permitted under the initial allocation can be no greater than amounts estimated to be released from affected sources under existing legislation.[25]

Enabling legislation would also have to provide for reductions in the levels of emissions allowed by each permit, so that new sources can purchase emission permits through auctions without increasing the total loading. Revenues generated through the auction process could be allocated to the government agency to pay for the administration of the permit system. This system for the subsequent allocation of permits would be consistent with the "polluter

pays"[26] principle. In addition, an auction system would help to combat strategic behaviour on behalf of firms who might be inclined to hoard permits to exclude competitors from the market.[27] Auctions could also conceivably act as an incentive for strict enforcement if governments depend on the revenue generated.[28]

7) Emission Reduction Credits

Emission reduction credits and allowing opting-in of new sources are additional means of allocating tradeable permits. Emission credits could be allotted on the basis of reductions from sources with existing permits and sources that do not have tradeable permits.[29] Even though it is important from the economic efficiency perspective to encourage as many firms to participate as possible in the tradeable permitting program, allowing such opting-in and other reduction credits may present a large challenge to the ability of a tradeable permits system to prevent pollution.

This possibility is a result of the consideration that without continuous monitoring technology, in practice it will be very difficult to measure actual emissions. It will obviously be to the advantage of firms to overestimate their emissions initially and to overestimate their reductions as this overestimation can translate into monetary gains. Thus, the creation of a tradeable permits system, based upon estimations of emissions could easily result in a total increase in pollutants to the environment. In the context of the U.S. emission reductions program, for example, credit was given for a 20% reduction in emissions which was later determined to have actually resulted in a 36% increase in emissions.[30] Other problems with such reduction credits arise where sources receive credit for reductions that would have occurred in any event.[31]

It should be noted that emissions reduction credits are one of the major sources of criticism regarding tradeable permits systems. There has been considerable litigation in the U.S. concerning whether credits given for reductions already achieved, or for reductions that would have been achieved through compliance with the pre-existing law, are contrary to the intent of Congress.[32]

8) Administration and Enforcement

From the perspective of economic efficiency, the administrative oversight of a tradeable permits system should be minimal so as to allow trading without significant transaction costs. The lead trading program in the United States involved self-monitoring and reporting by gasoline refineries, with little oversight by the U.S. Environmental Protection Agency.[33] The manageable number of large utilities subject to the acid rain trading program was intended to ensure that administrative oversight would not create significant transaction costs. However, there is growing evidence that even this simple program has resulted in a significant and complex administrative burden. The administrative oversight of a volatile

organic compound (VOC) trading system or an allowance trading system for hazardous waste generators would be even more cumbersome, given the number of sources involved.[34]

This is a serious problem, as effective monitoring and enforcement systems are absolutely essential to the success of any program. Continuous monitoring systems could be prohibitively expensive in some cases and the aforementioned monetary incentive to cheat would be enhanced if enforcement efforts were widely known by the regulated community to be lax.[35] The self-reporting of emissions data is especially open to potential abuse given these factors.[36]

Given the financial incentive to sell as many units of emissions as possible, firms are likely to emit very close to their legal allotments, meaning there will be an increased need for inspection. There must be a real deterrent against permit violations in the form of a high probability that offenders will be caught and prosecuted.[37]

In general, the necessary level of regulatory oversight, such as pre-approval of trades and frequent inspections, and the necessity of continuous monitoring systems, may make a tradeable permits system unwieldy and expensive to operate. Indeed, as the West Cost Environmental Law Research Foundation (WCELRF) has noted, the necessity for restrictions on trading and other regulatory oversight mechanisms may greatly reduce the alleged cost-effectiveness of such systems over traditional regulatory models.[38] These considerations are of particular concern given Environment Canada's limited experience in regulatory program administration and enforcement.[39]

9) What would be Traded under CEPA?

Finally, it is difficult to envision a tradeable permits regime given the federal government's lack of permitting powers under CEPA. Given the nature of the "local loading" problem, it would seem imprudent to allow trading of ocean dumping permits. The same concerns apply to the trading of "CEPA toxic" substances.

Tradeable air permits are the other possibility. However, the federal government shares jurisdiction over air pollution with the provinces. A trading regime is not the only way in which air toxics might be dealt with. It is therefore unlikely that the federal government would be able to rely on its general power to implement trading regulations. Rather, a level of federal-provincial cooperation, hitherto unknown in the environmental field,[40] would be required to implement such a system on a national basis.

IV. CONCLUSIONS AND RECOMMENDATIONS

1) General

Economic instruments can be used to supplement traditional regulatory systems. They cannot, however, replace such systems. Rather, the effective application of economic instruments requires the existence of enforceable environmental quality standards which serve as baselines for a minimum level of environmental quality that must be met in all cases.

Furthermore, it is essential, that economic instruments be designed very carefully to promote pollution prevention. Instruments of this nature must be supported by detailed enactments, which clearly establish all of the necessary aspects of the system.[41] This would be especially important in the case of tradeable permit systems. Adequate provisions for monitoring and enforcement are essential.

2) Emissions Trading

Experience with emission trading systems is extremely limited and their effectiveness is a matter of considerable arguement. The practicality of implementing such systems successfully is a matter open to serious question. Trading systems require extensive and complex administrative, monitoring and enforcement structures, and their potential environmental and economic effectiveness, even when such mechanisms are in place, is the subject of continuing debate.

In the context of CEPA, the dearth of permitting provisions under the Act presents a major problem in the design and implementation of a trading system at the federal level. To what federal permission would the tradeable permits attach? In light of the problems surrounding the use of tradeable permit regimes, particularly with respect to "local loading" effects, the authorization of the trading of ocean dumping permits, the only formal approval presently granted under CEPA, cannot be recommended.

The problem of "local loading" and numbers of potential sources of emissions also render trading systems inappropriate for the management substances considered "toxic" for the purposes of CEPA. The maintenance of the integrity of the environment should not be placed at risk to the pursuit of theoretical promises of economic efficiency.

There is, theoretically, a potential federal role in management of a trading system regarding non-"toxic" air emissions which permits interprovincial trades. However, in addition to overcoming the extensive administrative, enforcement, monitoring and distributive problems associated with trading systems, the federal and provincial governments would be required to work together in a manner unprecedented in the Canadian environmental policy

experience in order to establish such a system. Legislative provisions to implement a system of this nature could not be considered until a complete system design, acceptable to all stakeholders, was developed.

RECOMMENDATION:

CEPA should **not** *be amended to permit the trading of ocean dumping permits or emission trading involving substances considered "toxic" for the purposes of CEPA.*

3) Fees and Charges

The imposition of discharge fees under CEPA may present a number of problems, especially in relation to the absence of federal discharge permitting systems, except for ocean dumping, and the potential of federal discharge fees to interfere with provincial environmental permitting systems. Charges levied on the manufacture, use, or processing of "toxic" substances would avoid the possibility of interference with provincial jurisdiction, and provide incentives to reduce the manufacturing or use of such substances.

RECOMMENDATIONS:

Section 34 of CEPA should be amended to permit imposition of charges on use, processing, manufacturing, sale, import, or export of a "toxic" substance or products containing a "toxic" substance.

Revenues raised from such charges should be employed to finance federal contributions to the National Contaminated Sites Rehabilitation Program. Revenues might also be used to support the development and diffusion of skills and technologies related to pollution prevention within Canada.

ENDNOTES

1.See for example, Economic Instruments for Environmental Protection (Ottawa: Environment Canada, 1992).

2. Fines levied under administrative penalties, such as ticketing under s.134 of CEPA, or levied by a court upon conviction are part of an enforcement strategy. We distinguish economic instruments from these monetary penalties.

3.For a more detailed discussion of the use of environmental taxes and charges 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 Ltd. and the Canadian Institute for Environmental Law and Policy, 1993), pp.xxx-xxxi.

4. Glenna Ford, Doug MacDonald and Mark Winfield, "Who Pays for Past Sins? Policy Issues Surrounding Contaminated Site Remediation in Canada," Alternatives, Vol. 20, No.4, October 1994, pp.28-34.

5. Environmental Law Institute (ELI), The Tools of Prevention: Opportunities for Promoting Pollution Prevention Under federal Legislation (Washington, D.C.: ELI April 1993), p.23

6.The Application of Economic Instruments for Environmental Protection (Paris: Organization for Economic Cooperation and Development, 1989), p.43.

7.CEPA, Part VI.

8.Waste Management Fees Regulation, B.C. Reg. 299-92.

9.Ontario Fair Tax Commission, Fair Taxation in a Changing World (Toronto: University of Toronto Press, 1993), p.559.

10.The Constitution Act, 1982, s.91(3).

11.L.Nowlan and C.Rolfe, Economic Instruments and the Environmental Protection: Selected Legal Issues (Vancouver: West Coast Environmental Law Research Foundation) 1993), pp.25-26; citing Re: Agricultural Products Marketing Act [1978] 2 S.C.R. 1198 and Re: Employment and Social Insurance Act [1936] S.C.R. 427.

12.For a more detailed discussion of these issues, see Nowlan and Rolfe, Economic Instruments and the Environment.

13.It should be noted that provincial authority to impose such charges beyond administrative costs is an increasingly open question in light of recent jurisprudence. It has been suggested that such charges are a form of indirect taxation. See, for example, Re Allard Contractors Ltd. and District of Coquitlam and four other applications (S.C.C.), 109 D.L.R. (4th) 46. See also G.V. La Forest, The Allocation of Taxing Power Under the Canadian Constitution (2nd ed., 1981), pp.162-165.

14. Ned Lynch, National Contaminated Sites Remediation Program (Ottawa: Environment Canada, October 1991); William M. Glenn, et al., Toxic Real Estate Manual (Toronto: Corpus Information Services, 1988), p.4 speculates that there may be "...30,000 industrial sites...that are potentially contaminated with toxic material."

15. InterGroup Consultants Ltd., Sharing the Unfairness (Toronto: Canadian Council of Ministers of the Environment, background paper prepared for CCME Contaminated Site Liability Task Force Orphan Site Funding Workshop, January 1994.

16. Over time there is a tendency for market concentration to occur. See H.Daly and J.Cobb, For the Common Good (Boston: Beacon Press, 1989) p.49.

17. Transaction costs diminish the economic benefits of a trading scheme. In addition, the application of the Coase Theorem is relevant here. This theorem holds that where transaction costs are not negligible, the initial allocation of the right is a critical consideration, as whoever "owns" the right does not have to pay the transaction costs, and without transaction costs, the initial allocation is theoretically irrelevant.

18.Heidenreich and Winfield, "Sustainable Development, Public Policy and the Law," pp.xxxiii-xxxiv.

19.Clean Air Act Amendments of 1990, Title IV, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

20.Concerns have been expressed regarding the reliability of this system. D.Doniger, Counsel, Natural Resources Defense Council, "Remarks Regarding the Clean Air Act SO2 Trading System," to Ontario Ministry of Environment workshop on Economic Instruments and the Environment, September 1992.

21. ELI, The Tools, p.25.

22. Ibid.

23. This would be the result of the recommendation in Discussion Paper on Emission Trading by the Working Group of the Canadian Ministers of the Environment, to allocate emissions on the basis of

average emissions in recent years. Although the CCME Working Group recognizes the unfairness of rewarding firms who have lagged behind in pollution prevention, their solution of reducing allocation rights faster for those firms does not completely remove this inequality. The West Coast Environmental Law Research Foundation (WCELRF) recommends that firms out of compliance with standards achievable with best available control technology, be required to attain those emissions levels within 5 years.

24. This is the allocation system used under the U.S. 24. Clean Air Act sulphur dioxide emissions trading program for utilities.

25.Nowlan and Rolfe, Economic Instruments and the Environment, p.112.

26. This principle was first articulated by the Organization for Economic Cooperation and Development (OECD) in 1972; see OECD, "Guiding Principles Concerning International Economic Aspects of Environmental Policies," Council Recommendation C(72)128 (May 26, 1972).

27. However, combatting strategic behaviour would also require that the enabling legislation authorize the regulators to refuse sales to the highest bidder where there are reasonable grounds to believe that the bidder intends to use the permits for the purpose of excluding competitors from the market. The power to refuse such sales should be supported by the power to compel bidders to provide information as to their abatement costs. It may be prudent to require demonstration that marginal abatement costs exceed the price of the permit as a precondition of approval of purchases. Nowlan and Rolfe, Economic Instruments, p.115.

28.Nowlan and Rolfe, Economic Instruments, p.115. Concerns have been expressed that it is highly unlikely that the cost of a permit will accurately reflect the externalized cost of the harm done by the emissions. There are also concerns that the ability of community groups to purchase permits on the market to reduce pollution is significantly limited, given their relative lack of resources, compared to firms that would likely receive tax deductions for their purchases.

29. The U.S. EPA's emission reduction credits policy has four elements; offsets, netting, bubbles and banking. A full description of these elements is contained in Robert W. Hahn & Gordon L. Hester, "Marketable Permits: Lessons for Theory and Practice," 16, Ecology Law Quarterly, (1989) pp.370-375.

30. Richard Liroff, Reforming Air Pollution Regulation: The Toil and Trouble of EPA's Bubble (Washington, D.C.: Conservation Foundation, 1986) pp. 91- 97.

31. See David Hawkins, "Providing Economic Incentives in Economic Regulation," (1991) 8 Yale Journal of Regulation, p.463.

32.Nowlan and Rolfe, Economic Instruments and the Environment, p.121; see also "New York Sues to Limit Acid Rain Trading; EDF Suit Seeks to Close Credit Loophole" (March 19, 1993) Environment Reporter.

33. The minimal oversight is said to have played a significant role in the program's success. Hahn & Hester, "Marketable Permits: Lessons for Theory and Practice."

34. ELI, The Tools, p.25. ELI also notes, in footnote 102, the strong public opposition to the idea of allowance trading among hazardous waste generators, primarily due to the administrative oversight which would be required under such a scheme.

35. Arguably, that is the case presently under CEPA and other federal environmental statutes.

36. Fraud can occur in-house at the firm level and by laboratories hired to conduct such measurements. See United States General Accounting Office, Environmental Enforcement: EPA Cannot Ensure the Accuracy of Self-Reported Compliance Monitoring Data (Washington, D.C.: GAO/RCED, March 1993) at 21, 51, and 55-57.

37.Nowlan and Rolfe, Economic Instruments and the Environment, p.128, citing Barakat & Chamberlain, Study of Atmospheric Emission Trading Programs in the United states: Final Report (Winnipeg: Canadian Council of Ministers of the Environment, 1991) at G-14 and E.Rehbinder and R-U Sprenger, The Emissions Trading Policy in the United States of America: A Evaluation of it Advantages and Disadvantages and Analysis of its Applicability to the Federal Republic of Germany (Washington D.C.: Environmental Protection Agency, 1985)p.193.

38. Nowlan and Rolfe, Economic Instruments, p.103.

39.See generally K.Clark and B.Rutherford, "CEPA and Environmental Law Enforcement" in M.Winfield, ed., Reforming CEPA: A Submission to the House of Commons Standing Committee on Environment and Sustainable Development (Toronto: Canadian Institute for Environmental Law and Policy, 1994)

40.See generally K. Clark and B.Rutherford, "The Constitution, Federal-Provincial Relations, Harmonization and CEPA," in Winfield, ed., Reforming CEPA.

41.It should be noted that the U.S. Clean Air Act provisions for trading SO2 and nitrous oxides, Title IV, are 40 pages long.

INCORPORATING POLLUTION PREVENTION INTO PART II OF CEPA:
An Agenda For Reform

By

Paul Muldoon*
for the
CANADIAN ENVIRONMENTAL LAW ASSOCIATION

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1. Introduction

Toxic chemicals continue to pose a threat to the Canadian environment and the health of Canadians. Over the past few years, there has been a constant release of studies outlining the insidious effects of many toxic chemicals. Perhaps what is also being understood is the extent of information that science has yet uncovered of the interaction of toxic chemicals and the environment.

The Canadian Environmental Protection Act (CEPA), which was proclaimed in 1988, is the federal statute that is to provide the federal framework for the regulation of toxic chemicals. During the time since its proclamation, there has been new approaches developed to address the problems posed by toxic chemicals. Most important, regulatory regimes around the world are moving away from attempting to "controlling" chemicals to "preventing" their use, generation and release.

Although the term and thinking of the pollution prevention approach is not new, what is new is the concerted and comprehensive attempts being made to incorporate this approach into law. The integration of such an approach into CEPA would have fundamentally important benefits both with respect to the environment and with respect to the financial performance of the regulated community.

1.1 The Problem with Toxic Chemicals

Although CEPA's main focus is on the control of toxic substances, toxic contamination continues to be a major threat to the health of Canadians and their environment. Approximately 30,000[1] different toxic substances, such as mercury, lead, dioxins, furans and organochlorines are released into the Canadian environment every year. Numerous scientific studies have shown with certainty that:[2]

- A large number of human-made chemicals which have been released into the environment have the potential to disrupt the endocrine system of animals, including humans. Among these are the persistent, bioaccumulative, toxic compounds that include dioxins, furans, lead, mercury, PCBs, etc.

- Many wildlife populations are already affected by these compounds. The effects include thyroid dysfunction in birds and fish; decreased fertility in birds, fish, shellfish and mammals; decreased hatching success in birds, fish and turtles; gross birth deformities in birds, fish and turtles; metabolic abnormalities in birds, fish and mammals; behavioral abnormalities in birds; demasculinization and feminization of male birds, fish and mammals; defeminization and masculinization of female fish and birds; and compromised immune systems in birds and mammals. In 1991, two-thirds of the eagles born along Lake Erie and an entire

colony of 2,000 ring-billed gulls died. Toxic poisoning is suspected.

- The chemicals of concern may have entirely different effects on the embryo, fetus, or perinatal organism than on the adult; the effects are most often manifested in offspring, not in the exposed parent; the timing of exposure in the developing organism is crucial in determining its character and future potential; and although critical exposure occurs during embryonic development, obvious manifestations may not occur until maturity.

- Laboratory studies corroborate the abnormal sexual development observed in the field and provide biological mechanisms to explain the observations in wildlife.

- Humans have been affected by compounds of this nature and may be at risk to the same environmental hazards as wildlife. Some of the developmental impairments reported in humans are seen in adult offspring of parents exposed to synthetic hormone disrupters released in the environment. Concentrations of such substances measured in the US human population today are well within the range and dosage at which effects are seen in wildlife populations.

1.2 Purpose of the Paper

The purpose of this paper to provide an agenda of reform with the aim of incorporating pollution prevention into the provisions of CEPA. Part II is the primary component of CEPA that deals with toxic substances. Part II of CEPA contains, in effect, three regulatory regimes: regulation of substances already in use in Canada, new substances and the import and export of toxic substances and waste materials. This paper concerns itself with only the first component, the regulation of already in use. Other position papers have been formulated to address the other two components of Part II of CEPA.[3]

To this end, the next section outlines how CEPA presently works to control toxic chemicals. This section is designed to summarize the present operation of the statute and then provide some comment on its most significant weaknesses.

Section 3 of the paper provides an overview to the concept of pollution prevention. It outlines the definition of pollution prevention, the rationale for this approach and progress in other jurisdictions in implementing the approach. The section then describes how pollution prevention can be integrated into CEPA.

Finally, section 4 provide discussion on various issues with respect to the implementation of a pollution prevention regime.

2. CEPA and Toxic Chemicals: An Evaluation

2.1 How Existing Part II Works

2.1.1 Overview

The overall structure of how CEPA currently works is quite simple, although its administration and implementation is a different story. CEPA establishes an assessment regime to determine whether or not a particular substance is "toxic" as defined under the statute. A number of chemicals are prioritized for assessment (called the Priority Substances List). An assessment is carried out with specific powers given to the Ministers of Environment and Health to require information from the manufacture or user of the substance or to require that certain tests be undertaken. An assessment must be undertaken and results published within 5 years as to whether the substances are "toxic" or "not toxic."

If the substance is found to be toxic, it is placed on Schedule I which, in turn, gives the Ministers broad powers to regulate it. CEPA also includes certain procedures to review or complete actions (boards of review) as well as certain enforcement powers to ensure that the regulatory controls are adhered to and complied with in an appropriate manner.

In essence, then, the regime identifies priority substances, assesses them, and if found to be toxic, holds the potential to be regulated.

2.1.2 The Definition of "Toxicity"

Part II of CEPA centres around the definition of "toxicity" since the entire assessment process is geared to the determination of whether a substance satisfies this definition. Section 11 reads:

> "11. For the purposes of this Part, a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions
>
> (a) having or that may have an immediate or long- term harmful effect on the environment;
>
> (b) constituting or that may constitute a danger to the environment on which human life depends; or
>
> (c) constituting or that may constitute a danger in Canada to human life or health."

In effect, there are three thresholds under this definition. For a substance to be "toxic," the substance must:

(1) be present in the environment;
(2) in a quantity or concentration that:
(3) may have an harmful effect to the environment or may cause an endangerment to human health.

This definition is one particular to CEPA. Hence, it is common to qualify the more typical notion of toxicity by referring to this definition as "CEPA toxic."

2.1.3 Priority Substances List

The first step in the regulatory process under CEPA is to develop a Domestic Substances List (DSL). Section 25 requires the Minister of the Environment to compile an inventory of substances, called the DSL, that are considered to be "in use" in Canada. As of 1991, there were approximately 21,000 substances manufactured or imported in Canada on a commercial scale.

The second step is identification of substances on the DSL by the Ministers of Environment and Health as to which should take priority in being assessed. When these substances are identified, they are placed on the "Priority Substances List" (PSL). Section 12 outlines the procedure for this identification of the substances, notice requirements once identified, and a procedure to add and delete substances from the list.

The basic process is a somewhat flexible one. The present PSL was formulated by a multi-stakeholder committee convened in 1988. It was chaired by Dr. Ross Hume Hall. The report of this committee was submitted to the ministers in 1988. While the report submitted a list of some 50 substances, the ministers designated 44 substances to the PSL.

CEPA does not give any specific criteria as to which substances should be placed on the PSL. Although the ministers may consult, as was the case in 1988, the selection seems to be at the sole discretion of the ministers. Similarly, there is no criteria to deal with requests to add or delete substances to the PSL. CEPA only gives procedural requirements.

2.1.4 The Assessment Report

Once on the PSL, an assessment process is undertaken for each substance. That assessment process can best be described as a risk assessment process to determine whether that substance is toxic, in accordance with the definition noted above. Under section 13, the Ministers shall:

(1) undertake and prepare an assessment report;

(2) make the report available to the public;
(3) publish a summary in the Canada Gazette, including a statement of whether the ministers have found the substance is toxic and will be put on a List of Toxic Substances and whether regulations will be made to control.

It is the intent of this Part to have the substances assessed within a five year period.

Now that the 44 PSL substances have been assessed, there is presently an event to draw-up another PSL list of substances (PSL II).

2.1.5 Regulation of Substance - List of Toxic Substances

When a substance is deemed to be "toxic," the federal cabinet can place the substance on the List of Toxic Substances (TSL) pursuant to section 33. There is also a process to delete a substance from this list. If the substance is on the TSL, the federal cabinet, on advise of the ministers, is given broad and comprehensive powers to regulate those substances under section 34.

In addition to these powers, the federal cabinet is given special powers under section 35 to issue "interim orders" to regulate substances that are not on the TSL. Before these powers can be employed, however, the ministers must believe that immediate action is required to deal with a significant danger to the environment or to human life or health.

2.1.6 Boards of Review

Under CEPA, there are no formal appeal approaches. There are circumstances, however, where a board of review can be created. A board of review is a three member panel with jurisdiction to hold certain hearings and make determinations. Two areas relevant to the above discussion where board of review are possible are:

(1) Section 13 allows anyone to file a notice of objection where a substance has not been placed on the List of Toxic Substances. In this instance, the minister has the discretion as to whether or not to create a board of review.

(2) Section 14 allows anyone to file a notice of objection where the assessments referred to above have not been made to determine the toxicity of a substance. In this instance, the minister must establish a board of review.

To date, no boards of review have been established. There are a number of outstanding notices of objection under section 14.[4]

2.1.7 Information

Section 15 to 18 outlines the powers of the minister to collect and conduct investigations with respect to a substance as well as correlate and evaluate any data collected (section 15); require information and samples as directed by the minister (section 16); and requiring the submission of information where there is information available that reasonably supports the conclusion that the substance is or could be toxic (section 17). Section 18 goes further to allow the minister in certain circumstances to require, among other things, toxicological and other tests that the minister may direct.

2.1.8 Disclosure and Confidentiality of Information

The operative is section 19 whereby a person who provides information to the minister or a board of review under Part II may submit a written request that the information be treated as confidential. Once submitted, "no person shall disclose any information in respect of which a request for confidentiality has been under section 19."

There are a few exceptions as to where information can be disclosed when a request for confidentiality has been made. These sections usually deal with general information on the substance, safety measures and summaries of effect data.[5] Another exception pertains to the power of the minister. In this instance, the minister may disclose information where:[6]

> (a) the disclosure is in the interest of public health, public safety or the protection of the environment; and
>
> (b) the public interest in the disclosure clearly outweighs in importance any material financial loss or prejudice to the competitive position of the person who provided the information or on whose behalf it was provided.

Apparently, the minister has yet to exercise the power conferred under this section.

2.1.9 Remedial Measures

There are a number of provisions within the statute to deal with the situation where there are releases of substances on the TSL in contravention of regulations made under the Act. Some of these provisions include:

> (a) there are specific duties for persons who owns or has charge of substances on the TSL to report, prevent, remedy and give notice of release of such substances.[7]
>
> (b) where there is a release and those under duty to prevent and remedy does not take action, the federal government can take such action and be compensated for it.[8]

(c) powers to the minister to make regulations directed to ensure that the substance does not continue to enter the environment, such as enacting regulations directing a manufacture to replace the substance or product with one that does not pose a danger to the environment or to human life or health.[9]

2.2 Limitations of CEPA's Part II

In light of the above description, the next question, simply put, is the statute working? If not, why?

It is difficult to give any definitive response without a full and complete audit of both the legislative and administrative components examined. However, it can be argued that CEPA's Part II is deserving of a failing grade.

Limited Effect of CEPA

In the tenure of the statute, it took 5 years to complete the assessment of 44 substances. Of those substances, 27 were found to be toxic, while for 12 others such an assessment could not be made owing to "insufficient data."

Of the 27 found to be toxic, only a few substances have been subject to regulation at this point in time. Of the 12 substances where an assessment could not be made, they remain in legal limbo since there is no provision in CEPA to determine the course of events in this instance.

The Definition of Toxicity

CEPA is drafted such that a finding of "toxicity" is a precondition before government action. The problem is that the threshold to meet the CEPA definition of toxicity is so high, that the statute is effectively thwarted in its scope and effectiveness. For a substance to be found toxic, it must be emitted into the environment in a quantity or concentration to cause harm to the environment or human health. In effect, not only must a substance be capable of causing harm, but it must in quantities to actually or potentially cause harm. Hence, a substance that has the capability of causing harm may not held to be toxic, unless it can be demonstrate it is in quantities or concentrations to cause such harm. This approach presumes that (1) there is enough, or it is possible to have, data to what quantities or concentrations are in the environment; and (2) there is come good reason why chemicals that have the potential to cause harm should not be regulated.

CEPA Implies a Pollution Control Approach

Traditional approaches to environmental protection attempts to find acceptable levels of pollution and then find control technologies to collect and treat effluents and wastes at the "end-of-the-pipe." However, a large body of literature suggests have identified serious problems with the pollution control approach. For example,

> 1) The Problem of Inter-media Transfer: Pollution control, by focussing on end-of-the-pipe solution, often prevent pollutants from getting into one part of the environment by putting them into another. Wastewater treatment systems collect and concentrate pollutants into sludge. This sludge then must be incinerated, buried in a landfill or spread on land. Often, these measures re-introduce the same pollutants into the environment sought to be controlled.
>
> 2) Reductions in Total Discharges are Not Required: Pollution control focuses on assessing each individual source of pollution in isolation rather than determining the combined impacts of pollutants discharged into all parts of the environment from all sources. Hence, total discharges of contaminants into the environment may increase, even though an individual discharge may appear insignificant.

CEPA, while not expressly endorsing the pollution control approach, certainly suggests its legitimacy. Most important, CEPA's "cradle to grave" approach suggests that CEPA intends to deal with substances after they are created in a comprehensive way. The Act does not require measures to avoid their use or generation.

The Burden of Proof

Presently, it is up to the public and government to prove that a substance is toxic before it is regulated. The assumption that chemicals are innocent until proven guilty puts citizens, workers and the environment at risk. It means that chemicals may be in use for many years before their dangerous impacts are known. Massive quantities of toxics may have irretrievably contaminated the environment.

CEPA reinforces the view that all chemicals are "innocent" until proven otherwise. Although the government can require information, it is up to the government still to prove that the substance is toxic. This problem is especially acute where there is a lack of toxicological and other information. Government then must spend significant resources.

Substance-by-Substance Approach to Regulation

Regulations are developed under CEPA on a substance-by-substance basis. Of the ten of thousands of substances that are in use in Canada, CEPA is only triggered by assessing each substance one at a time. This is the case even though substances could be groups

together because of similar characteristics or similar effects.

Federal-Provincial Relations

There are many hoops and hurdles, including equivalency agreements, that must be overcome before any new regulations may be passed under CEPA.[10] This results in a patchwork of inconsistent regulations. These issues are discussed in the position paper submitted by the Canadian Institute for Environmental Law and Policy.[11] The concern is that the federal government should retain its ability to implement comprehensive nationwide toxics regulations.

3. Developing a New Framework for Pollution Prevention in CEPA: Recommendations for Reform

3.1 The Need for a New Direction: CEPA and Pollution Prevention

There are serious problems with CEPA. To overcome these problems, there is a need for a new approach - a pollution prevention approach.[12] This approach mandates that emphasis is placed on the avoidance or prevention in the generation or use of toxic substances. It rejects the after-the-fact pollution control approach that deals with toxic pollutants once generated.

This section reviews the rationale for pollution prevention and then a cursory overview as to the progress of implementing it in Canada and other jurisdictions.

3.1.1 Rationale for Pollution Prevention

There is a basic threefold rationale for pollution prevention. These can be summarized as follows:

Many Toxic Chemicals Still Enter the Environment

In the U.S., the most recent data reveals that 37.3 billion pounds of toxic chemicals entered the U.S. environment.[13] This is thought to be only a fraction of the actual amount. Even though there is a reduction of a total toxic releases of 6.6 percent between 1991 and 1992, there was an increase in the total amount of toxics generated during the same time. Moreover the overall decrease in release from 1988 to 1992 may not necessarily be due in large part to the economic recession of recent years rather than any environmental protection strategy.[14]

Similar data is not yet available in Canada, however, there is every reason to suggest that such levels, on a per capita basis, is about the same. Once the data from the National Pollutant Release Inventory is released, a more direct comparison will be possible.

The Economic Rationale for Pollution Prevention

The traditional pollution control approach is expensive. According to the U.S. Environmental Protection Agency, in 1990 the cost of all pollution control activities was estimated to be $115 billion annually by the year 2000. Additional environmental cleanup expenses are borne by states, cities, countries, automobile manufacturers, and ultimately consumers.[15]

Not only are pollution control measures expensive, there are many other costs arising

from attempts to deal with wastes. These include potential liability costs, on-site and off-site waste site disposal, transportation costs, among others.

Maintaining Competitiveness

Pollution prevention strategies had a direct relationship with international trade. Not only is the world market for pollution prevention products increasing but foreign markets will demand that Canadian products and processes comply with minimum pollution prevention content to maintain a level playing field. This offers an opportunity for Canadian industries to promote pollution prevention through the export of new technologies and expertise.

Pollution prevention promotes more innovative and more efficient processes which, in addition to the avoidance in the generation of toxics, also reduces resource and energy use.

Costs of Clean-Up and Remediation

There are few reliable or actual costs of the clean-up of toxic chemicals in Canada. The estimates that do exist elsewhere are quite dramatic. Scientists from Canada Centre for Inland Waters estimate a cost of $6 billion over next 30 years and $19 billion over next 100 years to contain, maintain, monitor and clean-up four of largest leaking dumps on the U.S. side of the Niagara River. The Northeast-Midwest Institute estimated will cost from 2.9 billion to 4.3 billion for a partial cleanup of only 10 of the 43 areas designated by as toxic hot spots by the International Joint Commission.[16]

3.1.2 Pollution Prevention in Canada

(a) Federal

There is no federal law or policy that adopts pollution prevention as a national goal or national approach in Canada. Nevertheless, in recent years, it has furthered a number of program or initiatives pertaining to pollution prevention. These include:

Voluntary Pollution Prevention Agreements: The federal government (along with Ontario) has signed a number of voluntary pollution prevention agreements with various industrial sectors, including automotive manufacturing, metal finishing, and automobile parts manufacturing. Although these programs are aimed at reducing toxic chemicals, it is the industries concerned that sets the goals and defines the term pollution prevention. Moreover, there is little, if any, accountability as to progress under these agreements.

Accelerated Reduction/Elimination of Toxics (ARET): ARET is a voluntary program

where participating industries will reduce or eliminate the emissions of designated substances. The novelty of the program prevents the ability to analyze its effectiveness. However, the non-governmental organizations withdrew their participation in it for a variety of reasons, including the fact that it was voluntary and the focus was on emissions rather than use of substances.

Offices of Pollution Prevention: There are national and regional pollution prevention offices which assist in coordinating pollution prevention activities. The national office has consulted on a "Pollution Prevention Framework," although its status remains unclear. The regional office located in Sarnia provides technical assistance and information to industries on pollution prevention.

Demonstration Projects: There are a number of existing or proposed demonstration projects, such as the multiprocess wet cleaning demonstration called "The Green Clean Project."

(b) Provincial

A number of provinces have, or expressed intention, to move to adopt a pollution prevention approach. Ontario, for example, has committed to pollution prevention in the development of its effluent limits under the Municipal-Industrial Strategy for Abatement (MISA). Most of these initiatives, however, are non-regulatory in nature.[17] For example, Ontario has a Pollution Prevention Pledge Program where facilities commit to certain actions in accordance with the criteria set out in the program. Ontario is also signatory to the voluntary agreements mentioned above.

3.1.3 Pollution Prevention in Other Jurisdictions

(a) United States

There is a relative long history of the pollution prevention effort in the U.S. The Hazardous and Solid Waste Amendments of 1984 asked the Environmental Protection Agency (EPA) to report to Congress regarding the feasibility and desirability of incorporating the requirements of a pollution prevention strategy. As a result, the EPA's 1986 Report to Congress provided a definition for both pollution control and source reduction and clearly outlined the differences in the two approaches.

In 1990, Congress passed the Pollution Prevention Act that has furthered federal policy in the nation. The Act improves the Hazardous and Solid Waste Amendments by outlining the pollution prevention policy and establishing a grant program for states. It also defines pollution prevention as source reduction. Through an Executive Order, signed in August of 1993, President Clinton directed federal compliance with pollution

prevention principles and, in particular, a definition of pollution prevention that focuses on the measures to avoid the creation of pollutants.

Apart from the federal level, there are approximately 105 state pollution prevention programs in the U.S.. that includes both regulatory and non-regulatory activities. Over half the U.S. states now have specific legislation in place with a number states that remain the model in the field.[18] Table I outlines the nature and kind of programs available. The programs range from technical assistance and information clearinghouses, loans or grants provided to waste generators, establishment of state offices of pollution prevention, requirements to integrate pollution prevention into regulatory and enforcement activities, prohibition of sale or manufacturing of specific items and the mandating of product substitution. A recent General Accounting Office report concluded:

> Nearly all states have what are termed "pollution prevention" programs, but the types and mandates of these programs tend to vary significantly. As a result, the source reduction approach is not becoming institutionalized as it should be within the state programs. Given that a majority of the programs emphasize waste recycling, treatment, and disposal, we conclude that the source reduction emphasis of the Pollution Prevention Act of 1990 in inconsistently supported on a nation-wide basis.[19]

In 1993, a report found that only 11 percent of the TRI forms from 1991 contained information indicating that companies were making efforts to prevent pollution.[20]

(b) Other Jurisdictions

The European Union (EU) which has fourteen member states was formed for the purposes of developing an economic alliance. In the Single European Act of 1986, the issue of environment was incorporated into EU policies. The EU have two very important Articles which highlight the concept of pollution prevention.[21]
It is important to note that these policies have to be incorporated into the member states legislative framework on environmental protection.

Scandinavian countries such as Sweden have developed a sunset regime for the worst toxic chemicals. Action plans on these candidate chemicals have been developed by the National Swedish Environmental Agency. These plans may include phase-out, bans or reduction in use or the use of other measures such as the imposition of taxes on products or substances. In 1988, a Swedish delegate to the Organization of Economic Cooperation and Development proposed a sunset regime to address all toxic chemicals in commercial use. This proposal was rejected.

In the Netherlands, government have set up centres to explore innovative technology especially in the area of energy and environmental protection.

3.2 A Legislated Pollution Prevention Regime for Canada

3.2.1 Overview - How the Regime Would Work

What would CEPA look like if it did incorporate pollution prevention? This section describes a "pollution prevention" CEPA. Although there are components taken from the former regime in CEPA, it would lead to substantial revisions. This new regime can be best described as follows:

(a) Declaration of Pollution Prevention Policy: The stated purpose of CEPA would be to eliminate the use and generation of toxic substances through pollution prevention. The toxics substances regime of CEPA would be divided into two parts: a sunset chemical protocol and a toxic substances part. The universe of substances to be addressed are those on the Domestic Substances List.

(b) Track 1 - Sunset Chemical Protocol: All substances on the Domestic Substances List would undergo a hazard assessment, that is, would be identified if they have certain characteristics. These characteristics are: persistence, bioaccumulation and toxicity. If a substance does have these characteristics, that substance would be placed on a sunset chemical list and scheduled to be phased out.

(c) Track 2 - Toxic Use Reduction: All substances not on the Sunset Chemical list would then potentially be subject to this component. Under this component, there would be an assessment of toxicity according to a new definition. This definition would focus on the intrinsic characteristics of a substance. If a substance is toxic, all facilities using, generating or releasing these substances would be subject to certain federal requirements, including: reporting, pollution prevention planning and performance standards. Further, technical assistance and other programs would be available to facilities.

(d) Track 3 - Additional Regulatory Options: To a large measure, the two tracks described above are in addition to many provisions now within CEPA. The federal government still should retain the powers under section 34 and other necessary powers under Part II of CEPA to regulate substances in ways necessary to protect the environment and human health.

(e) Implementing the Regime: The new pollution prevention regime would have a number of implications. One of the protections in the regime should be that the

impacts on workers and communities are addressed in the implementation of this regime. Further, in this transition to cleaner technologies and practices, workers should be given an explicit role in the decision-making process.

Table 2

Overview to a Proposed CEPA Pollution Prevention Regime

Existing Substances on Domestic Substances List

Track 1	Track 2	Track 3
Sunset Chemical Protocol	Toxic Use Reduction	Additional Regulatory Options
(Hazard Assessment)	(Hazard and Toxicological Assessment)	(Hazard and Toxicological Assessment)
Phase-out Timetables	Pollution Planning Requirements Technical/ Financial Programs Integration in Permits/ Enforcement	Specific Substance Regulation under Revised Section 34

TABLE 1

Table 3.1: State-Program Enabling Legislation

Description of legislation	Type of program		
	Regulatory	Nonregulatory	
Public sector provisions			
Establish an office of pollution prevention	37.5%	50.0%	46
Require on-site technical assistance to be conducted	37.5	78.9	
Establish and require maintenance of information clearinghouse	75.0	78.9	
Require loans or grants be given to waste generators	25.0	47.4	44
Integrate pollution prevention into environmental regulatory activities	50.0	31.6	
Integrate pollution prevention into environmental enforcement activities	37.5	21	23
Private sector provisions			
Target small businesses for technical assistance	62.5	65.8	6
Require product substitution	0.0	0.0	0
Encourage public scrutiny of hazardous waste generators	37.5	10.5	1
Require facilities to submit pollution prevention plans	75.0	44.7	5
Prohibit the sale of specific items	37.5	13.2	17
Prohibit the manufacturing of specific items	37.5	10.5	1

SOURCE: United States General Accounting Office, Pollution Prevention - EPA Should Reexamine Objectives and Sustainability of State Programs Washington, January, 1994, p. 24

3.2.2 A Legislated Pollution Policy

One of the most notable weaknesses of CEPA is that it lacks a clear legislative direction with respect to toxic substances. It also lacks any clear set of goals and benchmarks to determine whether progress is being made.

CEPA should include a statement of purpose expressly adopting pollution prevention as a national goal and thus committing the federal government to its furtherance.

The national pollution prevention policy for Canada is not only an environmental policy, but an industrial policy. As such, it should be the intention of the federal government to commit all departments to this approach and the goals set under it, and then conduct their activities accordingly.

It is therefore recommended that Part II of CEPA be amended by adding the following:

Statement of Purpose/ Declaration

> **The government of Canada hereby declares it to be the national policy of Canada that the use, generation and release of pollutants should be prevented in order to protect the health and well-being of Canada and the environment. The government of Canada shall develop policies, undertake programs and cooperate with other jurisdictions to effect this declaration.**
>
> **In order to further this purpose, the government of Canada commits itself to virtually eliminate the use, generation and discharge of persistent toxic substances no later than 2004 and to reduce the use, generation and release of other toxic substance by 50% by the year 1999. More specific goals and benchmarks should be established by regulation in consultation with interested constituencies.**

3.2.3 Definition of Pollution Prevention

Pollution prevention is distinct from end-of-pipe pollution control practices. The goal of pollution prevention is to protect human health and the environment by preventing or eliminating the use, generation and release of toxic substances. Reducing hazards to workers and consumers, as well as accidental releases and safety hazards, must also be considered.

One of the issues within the context of pollution prevention, however, relates to its definition. There are a number of definitions that have very different implications. Appendix 1 presents a range of definitions of pollution prevention in the United States

and Canada. In sum, there is no formal definition adopted by the Canadian government, while there is a wide range of definitions within the U.S.

Apart from the definition of pollution prevention, there are other terms used to express similar concepts, including: toxic use reduction, hazardous waste minimization and hazardous waste reduction.

The most important decision to be made with respect to pollution prevention pertains to its definition. Its effectiveness rests squarely on how the term is defined. The definition of pollution prevention will drive the planning, implementation and ultimately the effectiveness of government actions in this regard. Equally, the definition will influence, in fundamental ways, the response by those impacted by government actions.

What then are the elements of an appropriate definition for pollution prevention? It is suggested that there are five such elements.

Scope of Measures Within Scope of Pollution Prevention

One of the most important issues with respect to pollution prevention is whether a "pure" approach is taken to include in the definition only those measures that avoid the creation of pollution; or any measure, including pollution control measures, that seek to reduce pollution entering the environment. It is submitted that the former approach is the appropriate one; the latter simply reinforces and legitimizes the status quo.

Focus Must be on Use and Generation, Not Emissions

The focus of some definitions of pollution prevention is on the "release to the natural environment" of substances. This focus excludes the option of examining the use of chemicals and implies that industrial process change, product reformulation and substitution measures are not part of the definition. The most effective way of dealing with discharges to the environment is by moving up the pipe to examine ways to rethink the industrial process. Sometimes this requires an examination of feedstock chemicals and raw products. A definition that focuses on "release to natural environment" pre-empts such examinations.

Focus is on Use and Generation Whether in Workplace or Environment

The fact that some definitions focus on emissions to the "natural environment" are meant to exclude workplace issues. Pollution prevention is fundamentally important to worker safety and in-house pollution issues and as such, must be broad enough to encompass such issues.

Out-of-Process Recycling Process is not Part of Pollution Prevention

Some definitions allows one facilities' waste to be used as a feedstock by another facility. Similarly, these definitions allow for facilities' waste to be used for out-of-process recycling. However, this definition, by implication, would also include measures such as: incineration, on-site disposal, among other measures. A appropriate definition of pollution prevention should not include out-of-process recycling of substances. This issue is fully discussed in the report by the Pollution Prevention Legislative Task Force.[22]

Apart from the definition of pollution prevention, there is the issue of the relationship of pollution prevention to other terms such as source reduction. For example, many US states pollution prevention laws employ the term "toxic use reduction" (TUR).

One way of clarifying these terms is as follows:

* Pollution prevention is an umbrella concept that incorporates both source reduction and toxics use reduction;

* Source reduction focuses on reducing or eliminating pollution before it is created, that is, it attempts to avoid the generation of pollutants by process change or some other measure;

* Toxic use reduction goes beyond source reduction by encouraging practices that reduce the use of toxic chemicals in the first place. Hence, toxic use reduction requires an examination of feedstock chemicals, the kinds of processes and chemicals throughout the production process and the fact of a substance in products (which will eventually have to be dealt with at the disposal stage).[23]

While at the state level in the U.S., there is no consensus as to the definition of pollution prevention, the U.S. federal government, through the Pollution Prevention Act and the 1993 Executive Order mentioned above, does lend support for a strict definition of pollution prevention.

It is therefore recommended that:

Pollution prevention means those measures that only seek to avoid or prevent the use, generation and release of pollutants; all other measures pertain to pollution control approach.

Pollution prevention measures would include:

*** input substitution which would replace a toxic substance with one that is not toxic;**
*** product reformulation which would replace an end product with one that is non-toxic in terms of use, release and disposal;**
*** production unit redesign which would change the process of production to a cleaner one;**
*** improved operation and maintenance of production unit equipment and methods.**

3.2.4 Goals and Targets for Pollution Prevention

As mentioned above, it is important for a pollution prevention regime to have goals and targets to send the appropriate signals and to promote accountability of all interests by assessing whether progress is being made.

There are a number of types of goals and targets. These can be described as follows:

* National Goals: There should be national goals with respect to toxic substances. These national goals were described above.

* Sectoral Goals: These goals pertain to the targets and benchmarks to meet the national goal on an industrial sector basis.

* Facility-Based Goals: These goals are fashioned for specific facilities. These goals would be undertaken in the context of pollution prevention plans discussed below.

U.S. state pollution prevention laws often have goals and targets. For example, the Massachusetts law is intended to achieve, by 1997, through pollution prevention, a 50% reduction from 1987 quantities of toxic wastes generated by industry. The New Jersey Pollution Prevention Act of 1991 sets its goal to reduce the generation of hazardous substances at their source by 50% over 5 years following the preparation of pollution prevention plans.

It is recommended that, as part of the pollution prevention regime, there are requirements for the setting of sectoral and facility based goals and targets to meet the national goals and to adjudge progress generally.

3.2.5 Measuring Progress - Information Mechanisms

When setting targets, there must be a means in place to monitor progress. For this reason, consideration should be given to using a reformed National Pollutant Release Inventory to be of assistance in this regard. New reporting requirements under the Inventory should include: detailing how reductions were achieved (that is, through pollution prevention versus pollution control); quantities of toxic substances used as feedstocks; among other.
Further discussion of the Inventory can be found in the position paper submitted by the West Coast Environmental Law Association.[24]

> **It is therefore recommended that, in the reform of the National Pollutant Release Inventory, reporting requirements be included that would enable the federal government to measure progress in achieving pollution prevention goals and targets.**

3.2.6 Track 1 - Sunset Chemical Protocol

(a) General Regime

With the general legislative framework in place, the pollution prevention approach would be is now divided into two tracks: Track 1 is the Sunset Chemical Protocol; and Track 2 is the Toxic Use Reduction approach. Track 1 is an effort to focus on those substances that are so much of a concern that they should be phased-out.

The notion that the worst and most dangerous toxic chemicals should be phased-out over time has quickly gained popularity in Canada, although its origins are elsewhere.[25] The basic idea of this approach is that those substances that have certain characteristics (such as being able to persist in the environment for a long period of time and accumulate in fish, wildlife and humans) should be phased-out or "sunsetted" over time.

The International Joint Commission (IJC) endorsed the sunset chemical approach in its Sixth Biennial Report on Great Lakes Water Quality, and confirmed its view in the Seventh Biennial Report.[26] The IJC, a U.S.-Canada agency, is vested with the responsibility to review the progress made by the governments to achieve the objectives of the Great Lakes Water Quality Agreement. The IJC defines sunsetting as:

> a comprehensive process to restrict, phase out and eventually ban the manufacture, generation, use transport, storage, discharge and disposal of a persistent toxic substance. Sunsetting may require consideration of the manufacturing processes and products associated with a chemical's production and use, as well as of the chemical itself, and realistic yet finite timeframes to achieve the virtual elimination of the persistent toxic substance.[27]

The concept of sunset chemicals has been endorsed by the New Directions Group, a body comprised of industry and environmental representatives.[28] In the past two years, sunsetting chemicals has been discussed, and sought to be implemented, in various consultations such as the Canadian federal consultations Accelerated/Reduction and Elimination of Toxics and the Pollution Prevention Legislative Task Force. Further, the province of Ontario has developed a candidate list of substances for phase-out.[29]

This sunset protocol differs from CEPA at the present time in that it focuses on hazard assessment in the sense that seeks to phase-out substances based on their characteristics rather than the vague and complex notion of risk. As such, the implication of this approach is that the government of Canada has decided, as a matter of public policy, to eliminate the use and generation of persistent, bioaccumulative and toxic substances.

There may be a provision that allows those producing or using a substance on the sunset chemical list to establish that the substance should not be phased-out immediately. In this context, the substance is still on the list, but its timeframe is adjusted.

It is therefore recommended that:

As part of the CEPA's pollution prevention strategy, a sunset chemical protocol be incorporated. This protocol would seek to phase-out all persistent, bio-accumulative and toxic substances. The process would:

(1) identify all persistent, bioaccumulative and toxic substances;
(2) identify the loading and sources of those substances;
(3) consult with all stakeholders relative to those sources to set timetables and deal with other transition issues relative to the phase-out;
(4) monitor the phase-out schedules.

(b) Toward a Class-by-Class Assessment

The Sunset Chemical Protocol and the Toxic Use Reduction program, described below, is still based on a substance-by-substance approach to the regulation of toxic substance. The fact that both programs are based on understanding the inherent toxic characteristics of the substance does provide a route to move to assessing classes of substances. More effort, however, must be on developing a methodology for a class-by-class assessment. The Virtual Elimination Task Force of the International Joint Commission did make a contribution in this regard with the development of "use trees" to the understanding the uses and applications of families of substances. In particular, a case study titled "Application of a Virtual Elimination Strategy to an Industrial Feedstock Chemical - Chlorine"[30] by T. Muir et al. is a good starting point for discussion.

Further, the efforts to develop a class-by-class approach is particularly important because of the recommendations by the International Joint Commission in its Sixth and Seventh Biennial Reports. In those reports, the Commission recommends that chlorine as an industrial feedstock should be sunsetted. These recommendations should be furthered at any rate. However, the development of a class-by-class approach would certainly assist the furtherance of this recommendation.

> **It is recommended that emphasis be placed on developing a methodology for regulating substances on a class-by-class basis. Consideration should be given to the approach undertaken in the case study by T. Muir et al. in Volume 2 of the Virtual Elimination Task Force Report. Further, priority should be given to furthering this effort with chlorine as the focus of attention in accordance with the recommendations in the Sixth and Seventh Biennial Reports of the International Joint Commission.**

3.2.7 Track 2 - Toxic Use Reduction Approach

The intent of Track 1 is to identify and then eventually phase out the substances that pose the most significant danger to Canada. However, there are many other substances, that although not as a serious concern, still should be part of a regime that promotes their reduction. The effort to reduce the use and generation of these substance is the proposed Track 2 - Toxic Use Reduction.

(a) The Definition of Toxicity Revisited

As mentioned above, one of the problems identified under CEPA was that the very stringent definition of "toxic" pre-empts a comprehensive program to reduce the use and generation of toxic substances in Canada. One of the particular problems is the relates to the stringency of data requirements.

The definition of toxicity should be amended. The focus of this new definition should be on the toxic property of substances rather than strictly exposure. In short, if

the substance can cause harm to the health or environment in Canada, it should be deemed toxic.

It is recommended that the definition of toxicity be reviewed in Part II of CEPA. Emphasis should be placed on understanding the inherent characteristics or properties of toxic chemicals.

One of the problems with developing a definition for toxicity is that, regardless of what definition is used, there will often be the lack of a full information base necessary to undertake an assessment. One example in this regard is with respect to the assessment of the 44 substances on the Priority Substances List. There were 12 substances where a determination of toxicity could not be made owing to gaps in information.

It is submitted that there must be reform in overcoming this problem. The two mechanisms that should be considered is reversing the onus in certain circumstances such that when there is an information gap, those using or importing the substance should have the onus of providing all information necessary to make a determination. The second mechanism is the standard of evidence may have to be changed from requiring absolute certainty to making decisions based on the weight-of-evidence. Both the reverse onus and weight-of-evidence approach have been recommended by the International Joint Commission in their Fifth and Sixth Biennial Reports in 1990 and 1992 .

It is therefore recommended that serious consideration be given to:

*** imposing a reverse onus provision such that where there is an information gap, the interest using or importing the substance must ensure all information necessary to make an assessment is available; and**

*** changing the standard of proof such that actions can be taken even without absolute scientific certainty so long as the weight-of-evidence suggests that action would prudent in the circumstances.**

(b) Pollution Prevention Planning

Pollution prevention planning is a relatively new concept and is evolving quickly. It is an essential component of an overall pollution prevention framework. Pollution prevention planning encompasses the comprehensive examination of operations at a facility as well as the examination of successive stages in the lifecycle of products with the goal of avoiding, eliminating or reducing pollution. Mandatory pollution prevention planning is required to overcome informational, attitudinal and corporate organizational barriers.

In essence, pollution prevention planning requires a facility to review its production

processes, to plan how to avoid or prevent the use and generation of designated toxic substances. There is usually not an automatic requirement to implement the plan. The fact that a facility has done the "homework" in understanding how to eliminate or reduce the use of toxic chemicals is often enough to provide the evidence to the facility that there is serious benefit in implementing the plan. There could be provisions for implementing the plans, however, in certain circumstances. Further, it is appropriate to have an auditing of the plan by experts knowledgeable in pollution prevention. These experts are trained through special institutions to this end. (See below for a discussion of this notion.) In other words, there would not be a large bureaucracy created under this regime; instead, it would use existing personnel although some retraining of that personnel will be necessary.

Further, there should be some provision to have summary of these pollution prevention plans available to the public for review and comment.

By mid-1993, 21 US states enacted facility pollution planning legislation. The requirements vary by state. New Jersey has the most rigorous law, compelling hazardous waste generators to develop and implement a pollution prevention plan featuring a process-by-process breakdown of how substances are used and generated within a facility. In contrast, Iowa has an advisory law which lays down a framework for plans that hazardous waste generators are encouraged to complete.

Although the diversity of industrial process precludes the dictation of the exact content of pollution prevention plans, the common elements considered appropriate for a comprehensive facility wide pollution prevention plans are described in Table 3.

What happens when facilities fail to implement their plans? In these circumstances, the federal government should have the authority to make performance standards that would ensure all facilities within a sector are governed by a "level playing field." A performance standard would not direct exactly how a facility should meet a goal, but what the goal is and when it must be achieved. These goals would be based on what facilities could do using pollution prevention.

It is therefore recommended that CEPA require Pollution Prevention Plans for facilities and activities using or generating designated substances.

The pollution prevention plans should be comprehensive in nature and include:[31]

*** a definition of their own production units and processes;**
*** the development of process flow diagrams and material balances that described the operations (a material balance requires that raw materials be**

tracked from process input to process input);
*** the calculation of the cost of using substances by production unit;**
*** the development of options to avoid the use and generation of the substances; and**
*** the development of timeliness to implement those options.**

These plans must be approved by certified pollution prevention planners who have been specifically trained for the task. Further, there should be some provision to have summary of these pollution prevention plans available to the public for review and comment.

Provisions should also be in place that, in appropriate circumstances, where the plans are not carried through with, the federal government can require the implementation of the plan on a timely basis.

TABLE 3

Suggested Elements in a Pollution Prevention Plan Under CEPA

* a policy statement of management support for pollution prevention
* a statement of reduction goals, the reasoning behind them and a schedule for meeting those goals
* a description of efforts initiated in the past that qualify as pollution prevention and an assessment of those efforts' successes and failures
* a quantitative description of current processes in which toxic chemicals are used, generated or released
* a multimedia framework, addressing air, water and waste and worker and consumer safety and health issues and both accidental and routine exposure
* a flowchart of toxic chemical use for each major production process
* estimates of cost associated with the current and projected use of toxic chemicals or pollutants, including the cost of chemical purchasing, reporting, record keeping, pollution control, waste management, employee protection, explosion protection and insurance
* a comprehensive summary of the plan, which does not disclose trade secrets
* publicly announced goals for reducing toxic chemical use and waste
* a process for identifying pollution prevention options in specified areas and assessing their technical and economic feasibility, including (at a minimum)
* changes in operating and maintenance procedures
    * process changes
    * equipment modifications or modernization
    * changes in a product or its formulation
    * substitution of non-toxic or less toxic

* financial and technical analysis of identified options in light of current operating conditions
* criteria or rationale for choosing or discarding identified options for implementation
* schedule for implementing selected options and a procedure for measuring and monitoring progress in achieving reductions
* description of opportunities for employee involvement and training
* certification by responsible corporate officers or facility managers.

3.2.8 Technical/Financial Programs

One of the common elements of a pollution prevention regime pertains to financial and technical assistance programs to industries subject to it. These programs are described elsewhere and are only identified here.

A Federal Pollution Prevention Financial Assistance Program: One of the prohibitive aspects of pollution prevention is that it may require capital investment to undertake a change in the process or research into how to change the progress. Owing to the proposed national policy on pollution prevention, it would be entirely appropriate for the federal government to facilitate change through a capital loan and grant program. This program would only support pollution prevention initiatives and would be carefully monitored as such.

Changes to Financial Barriers to Pollution Prevention: There is a strong argument to be made that there are a number of disincentives to pollution prevention at the federal level. As such, the federal government should undertake a study examining all such barriers, including a study of the Income Tax Act to ensure that provisions like Capital Cost Allowances encourage pollution prevention as opposed to pollution prevention measures.

3.2.9 Institutional Proposals

Information Clearinghouse: It is imperative that facilities and others subject to the proposed pollution prevention regime have available the information necessary to fulfil their requirements. The clearinghouse, which could in an electronic format, could be housed in the offices of pollution prevention already in existence.

Offices of Pollution Prevention: There are already two federal offices of pollution prevention. These offices should be made inter-departmental in nature and should be given a statutory base.

Pollution Prevention Institutes: As mentioned above, the pollution prevention plans submitted by industry should be certified by experts in the field. These experts should have to undergo training at Pollution Prevention Institutes established at universities throughout Canada. Pollution prevention does entail new thinking and a new approach. As such, there is need to retrain some experts in the field as well as ensure those entering the field understand both the theory and practice of pollution prevention. Many U.S. state laws require the establishment of such institutions.

3.2.10 Other Programs

Above are programs and activities that seek to encourage pollution prevention. However, there are also measures that should be incorporated that are more regulatory in nature. The following are proposed:

Pollution Prevention and Federal Approvals: The federal government gives a number of environmental approvals. These approvals should be undertaken in light of the pollution prevention regime proposed above. For example, an approval with respect to a pulp and paper mill should be issued in light of the requirements of pollution prevention plan and the contents of that plan.

Pollution Prevention and Enforcement: Another position paper addressed the issue of enforcement under CEPA.[32] the important issue at this point, however, is that enforcement proceedings should be incorporated into the implementation of the proposed pollution prevention regime. For example, one consequence of an enforcement action may be the implementation of the pollution prevention plan be required as a penalty in accordance to the one of the provisions noted above.

Other Powers for CEPA - Reforming section 34: There are many other programs and activities that would assist in the furtherance of the pollution prevention regime. Hence, it is important that CEPA be amended to ensure that the minister has broad powers to undertake such measures. These measures might include:

* amendments to section 8 that would direct the minister to formulate environmental objectives, codes of practice and guidelines to further pollution prevention goals;[33]

* amendments to section 34 to provide for the requirement of pollution prevention plans along with other measures, including:

    * the power to prohibit the sale and manufacture of specific products;

    * the power to require product substitution.

3.2.11 Track 3 - Additional Regulatory Options

Tracks 1 and 2 will be influential in attempting to come to grips with the toxic pollution problem in Canada. To a large measure, the two tracks are in addition to many provisions now within CEPA. As such, it is submitted that the federal government still should retain the powers under section 34 and other necessary powers under Part II of CEPA to regulate substances in ways necessary to protect the environment and human health.

4. Issues in Implementing a Pollution Prevention Regime

The proposed pollution prevention regime has a number of implications for its implementation. Three such implications will be discussed: whether there should be a new statute or whether the regime can be incorporated in Part II of CEPA; the constitutional dimensions of the regime; and the implications for other departments.

4.1 Should there be a New Act or a Reformed CEPA?

It is imperative that the proposed pollution prevention have a statutory base. As stated by the General Accounting Office in the U.S. noted, "the lack of a specific statutory base could undermine the efficacy of some of the programs.."[34] It has been argued that a new pollution prevention statute at the federal level would be the most appropriate.[35] However, this debate should not pre-empt a full discussion as to how pollution prevention should be incorporated into CEPA.

4.2 Constitutional Issues

Perhaps one of the complex questions is whether the federal government has the constitutional authority to implement the proposed regime. It is submitted that the federal government does have such powers. This issue will not be discussed in depth here, since it has been dealt with elsewhere.[36]

However, there are a number of comments worthy of note. First, the federal government has taken a narrow interpretation as to what its constitutional powers are to regulate toxic chemicals. One commentator put it this way:

> "The federal government is still plagued by what I would call conservative legal advice in relation to its constitutional authority to act in environmental matters. We submit that the constitutional constraints invoked by Environment Canada are more perceived than real, and we suggest that a number of heads of federal power can be used to support and justify a strong national toxics program."[37]

Second, the proposed pollution prevention regime is not a large intrusion on provincial jurisdiction, if at all. Indeed, a significant aspect of this regime is federal government leadership through technical assistance, institutional reform and an extension of existing regulatory powers. One exception may be the requirement for pollution prevention plans. However, there are opportunities at this point to cooperate with the provinces to ensure there is a coherent national regime in this regard. Federal-provincial cooperation could be facilitated through inter-governmental agreements. However, these inter-government agreements should be undertaken according to the reforms suggested in a paper submitted by the Canadian Institute for Environmental Law and Policy.[38]

4.3 Transition Planning Considerations

The imposition of a pollution prevention regime will assist in cleaner production processes in Canada to the long term benefit of the environment and the Canadian public. However, it should also be noted that in the implementation of the regime, it must be made clear that workers and communities should not be made to disproportionately suffer the detriment of such changes.[39] As such, efforts must be made to plan the transition from dirty to clean technologies in a fair and equitable way. There has been considerable discussion on this, however, one of the most important voices in this regard are the workers and communities where the facilities are located.

> **It is therefore recommended that provisions are developed to ensure there are mechanisms in place to protect workers and communities in the transition to cleaner production processes. These mechanisms should be developed in close consultation with the labour interests and community leaders. Finally, workers should be given a legitimate role in all decisions pertaining to the planning for transition.**

APPENDIX 1

Definitions in the United States

(a) International Definitions

The Virtual Elimination Task Force of the International Joint Commission stated:

> prevention attempts to avoid use or generation in the first place, through process change, product reformulation, and raw material substitution... The goal is clean production processes, closed loop recycling and elimination of the use and generation of persistent toxic substances.[40]

The report of the Task Force was endorsed by the International Joint Commission in the Commission's Seventh Biennial Report.

(b) U.S. Federal Legislation

The US Pollution Prevention Act of 1990 defines pollution prevention as source reduction.[41] The Act states that it is "to be the National policy of the United States that pollution should be prevented or reduced at source..." Source reduction is defined in the Act[42] any practice which --

> (5) (A)(i) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and
> (ii) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.
>
> The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.
>
> (B) The term "source reduction" does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service.

The U.S. Environmental Protection Agency defines "pollution prevention" as

> "the use of materials, processes, or practices that reduce or eliminate the creation of pollutants or wastes at the source...[It] includes practices that reduce the use hazardous materials, energy water or other resources, and practices that protect natural resources through conservation or more efficient use."[43]

Massachusetts: Toxics Use Reduction Act

Toxic use reduction is defined as

> in plant changes in production processes or raw materials that reduce, avoid or eliminate the use of toxic or hazardous substances or generation of hazardous by-products per unit of product, so as to reduce risks to the health of workers, consumers, or the environment, without shifting risks between workers, consumers or parts of the environment.
>
> Toxic use reduction shall be achieved through any of the following techniques:
>
> * input substitutions, which refers to replacing a toxic or hazardous substance or raw material used in a production unit with a non-toxic or less toxic substance;
> * product reformulation, which refers to substituting for an existing end product, an end product which is non-toxic or less toxic upon use, release or disposal;
> * production unit redesign or modification, which refers to developing and using production units of a different design than those currently used;
> * production unit modernization, which refers to upgrading or replacing existing production unit equipment and methods with other equipment and methods based on the same production unit;
> * improved operation and maintenance of production unit equipment and methods, which refers to modifying or adding to existing equipment or methods including, but not limited to, such techniques as improved housekeeping practices, system adjustments, product and process inspections, or production unit control equipment or methods; or
> * recycling, re-use or extended use of toxics by using equipment or methods which become an integral part of the production unit of concern, including but not limited to filtration and other closed-loop methods.
>
> Toxics use reduction shall not include or in any way be inferred to promote or require incineration, transfer of one medium of release or discharge to other

media, off-site or out-of-production waste recycling or other methods of end of pipe treatment of toxics as waste.

Pollution Prevention Definitions in Canada

By and large, the Canadian perspective on pollution prevention seems to be based on the concept of source reduction rather than toxics use reduction.

The Ontario Ministry of Environment and Energy has defined pollution prevention as:

> any action which reduces or eliminates the creation of pollutants or wastes at the source, achieved through activities which promote, encourage or require changes in the basic behavioral patterns of industrial, commercial and institutional generators or individuals. It can be achieved through: process changes, raw material substitution or use reduction; product redesign; in-process recycling; and improved maintenance or operating procedures.

The British Columbia proposed Environmental Protection Act[44] defines pollution prevention as follows:

> measures taken to reduce or eliminate pollution by means of a hierarchy of measures in the following order of implementation:
>
> (a) the elimination of the use of polluting substance;
> (b) the substitution of polluting substance with less polluting substances;
> (c) the reduction in the introduction and use of resources and pollution substances;
> (d) the elimination and reduction in the generation of polluting substances;
> (e) the reuse and recycling of polluting substances;
> (f) the recovery of energy and other resources, and as a last resort; and
> (g) the recovery, treatment and disposal of residual polluting substance.

Industry Science and technology Canada defines pollution prevention as:

> a practice that reduces or prevents pollution at the source through cost effective changes in the design and operation of production facilities or transportation systems, or the design and use of products.

New Jersey: Pollution Prevention Act

Pollution prevention means:

changes in production technologies, raw materials or products, that result in the reduction of the demand for hazardous substances per unit of production manufactured and the creation of hazardous products, non-product outputs or destructive results, or changes in the use of raw materials, products or production technologies that result in the reduction of the input use of hazardous substances and the creation of hazardous by-products or destructive results;
or on site facility changes in production processes, products or the use of substitute raw materials that result in the reduction of the amount of hazardous waste generated and disposed of on the land or hazardous substances discharged into the air or water per unit of product manufactured prior to treatment, or that reduce or eliminate, without shifting the risks of the use of hazardous substances at an industrial facility pose to employees, consumers and the environment.

Pollution prevention shall include, but need not be limited to, raw material substitution, product reformulation, production process redesign or modification, in process recycling and improved operation and maintenance of production process equipment.

Pollution prevention shall not include any action or charge entailing a substitution of one hazardous substance, product or non-product output for another that results in the creation of substantial new risk, and shall not include treatment, increased pollution control, out of process recycling...

ENDNOTES

1. Citizens Guide to the Canadian Environmental Protection Act. (Environment Canada, May 1988).

2. The summary of the environmental impacts of toxic substances is derived from the following sources: Statement from the Work Session on Chemically Induced Alterations in Sexual Development: The Wildlife/Human Connection, Wingspread Consensus Statement, Wingspread Retreat, Wisconsin, USA, July 26-28, 1991; Glen A. Fox, "What Have Biomarkers Told Us About the Effects of Contaminants on the Health of Fish-Eating Birds in the Great Lakes?" Journal of Great Lakes Research 19:4 (1993), pp. 722-736; Theor Colborn, "Epidemiology of Great Lakes Bald Eagles" Journal of Toxicology and Environmental Health 33:4(1991), pp. 395-453; Theo Colborn, et al. Great Lakes Great Legacy? (Ottawa-Washington: Conservation Foundation and the Institute for Research on Public Policy, 1990); T. Colborn, F.S. vom Sall and A.M Soto, "Developmental Effects of Endocrine-Disrupting Chemicals in Wildlife and Humans" Environmental Health Perspectives: Journal of the National Institute of Environmental Health Sciences 101:5 (October, 1993), pp. 378-384.

3. See: Mark Winfield, Reforming the New Sustances Provisions of CEPA (Canadian Institute for Environmental Law and Policy, 1994); John Jackson, Reforming the Export\Import Provisions of CEPA, 1994.

4. The Canadian Environmental Law Association filed a notice of objection on March 31, 1994 alleging the Minister of the Environment did not complete the assessments as required pursuant to sections 14 and 89 of CEPA.

5. CEPA, ss. 20(3); Also see: s. 20(4).

6. CEPA, s. 20(6).

7. CEPA, s. 36.

8. CEPA, s. 36(5); 39.

9. CEPA, s. 40.

10. CEPA, ss. 34(5) and (6).

11. Karen Clark and Barbara Rutherford, The Constitution, Federal-Provincial Relations, Harmonization and CEPA (Canadian Institute for Environmental Law and Policy, 1994).

12. See for in-depth discussion: Paul Muldoon, "Toward a National Pollution Prevention Strategy: Principles for Reform to Address the Problem of Toxic Contamination in the Canadian Environment" in Canadian Bar Association Committee on Sustainable Development in Canada Sustainable Development in Canada: Options for Law Reform, Ottawa, 1990.

13. U.S. Environmental Protection Agency, 1992 Toxics Release Inventory, Public Data Release.

14. "USA's strides in war on toxic emissions", USA Today, April 20, 1994. page 6A

15. See EPA, Environemntal Investments: The Cost of A Clean Environment (Washington, D.C.: Island Press, 1991).

16. See: National Wildlife Federation and the Canadian Institute for Environmental Law and Policy, Prescription for Healthy Great Lakes, 1991, p. 7.

17. The Ontario Ministry of the Environment and Energy and B.C. Ministry of the Environment have incorporated pollution prevention components in recent regulations regarding pulp and paper. In 1992, the B.C. government announced a draft regulation asking pulp and paper mills to reach virtual elimination of AOX discharges, while the recent regulation passed by the Ontario government asked that pulp and paper mills have a phase out plan for AOX developed by the year 2002. While the B.C. government announced an aggressive pollution prevention regulation that will focus on development of safe alternatives, Ontario does not enforce a comprehensive strategy. Ontario pulp and paper mills are not obliged to implement these AOX phase out plans by the year 2002.

18. Refer to New Jersey Pollution Prevention Act, 1991; Massachusetts Toxics Use Reduction Act; Oregon Toxics Use Reduction and Hazardous Waste Reduction Act; New York: Indiana; Minnesota; Illinois; California; Georgia, Maine, Tennessee, Washington: Florida: Iowa; Kentucky; Ohio; Vermont; Wisconsin.

    See Survey and Summaries: State Legislation Relating to Pollution Prevention, by Waste Reduction Institute for Training and Applications Research, Inc. April 1991.

19. General Accounting Office, Report to the Chairman, Subcommittee on the Environment, Energy, and Natural Resources, Committee on Government Operations, House of Representatives, Pollution Prevention: EPA Should Re-examine the Objectives and Sustainability of State Programs, January, 1994, p. 53.

20. Citizen Action, 1993, Poisoning The Great Lakes, page 2.

21. Article 130R state that the policy on environment must contribute "to the pursuit of: the preservation, protection and improvement of the quality of the environment; the protection of human health; the prudent and rationalization of natural resource". Two other articles further supported that "action by the Community relating to the environment shall be based on the principles that preventative action should be taken, that environmental damage should as a priority be rectified at the source, and the polluter should pay. Environmental protection requirements shall be a component of the Community's other policies" See: Frans Van Kraay, 1993, in Law Teacher, page 80-85, volume 28, n1 and Andrew Jackson, 1993, "Environmental Law in the European Community: Greek Tragedy or Epic Tale?, Natural Resource and Environment, Fall 1993, page 19-22.

22. Pollution Prevention Legislative Task Force, Final Report, September, 1993, p. 21.

23. By way of illustration, a company may use 100 tonnes of a toxic substance, of which 90 tonnes are put into products and 10 are wasted. Eliminating or reducing the 100 tonnes of the toxic substance is fundamentally different from that of eliminating or reducing the 10 tonnes of waste prior to release (source reduction). Once the useful life of the product is spent, the toxic substance will eventually find its back into the environment, through landfill or incineration.

24. C. Rolfe, Ensuring Meaningful Public and Worker Involvement in Environmental Protection (West Coast Environmental Law Association, 1994).

25. In 1989, Bo Wahlstrom, a Swedish delegate to the OECD, proposed that the UN adopt a sunsetting regime to address the most hazardous chemicals in commercial use. See generally: Bo Wahlstrom, "Sunsetting for Dangerous Chemicals" Nature 341 (1989), p. 276; J. Foran, "The Sunset Chemical Proposal" International Environmental Affairs 3:4(1991), pp. 303-308; Paul Muldoon, "Sunset Chemicals: The Dawning of a Less Toxic Canada" Probe Post, 14:1 (1991),

pp. 12-14.

In 1991, the Canadian Institute for Environmental Law and Policy and the National Wildlife Federation outlined a detailed proposal for sunsetting chemicals in the report A Prescription for Healthy Great Lakes: Report of the Program for Zero Discharge.

Swedish progress is being made on sunsetting some hazardous chemicals. An action plan is developed for each target chemical having phase-out as its ultimate goal. Regulatory measures are taken to implement these action plans.

In the U.S., the Proposed Great Lakes Initiative will undertake to look at sunsetting persistent toxic chemicals from the Great Lakes.

26. IJC. 1994. Seventh Biennial Report on Great Lakes Water Quality. Further, the IJC established the Virtual Elimination Task Force to discuss the feasibility of sunsetting the worst persistent toxic chemicals and its findings can be found in A Strategy for Virtual Elimination of persistent Toxic Substances (Volume 1 and 2).

27. International Joint Commission, Sixth Biennial Report on Great Lakes Water Quality (Washington, Ottawa), p. 25.

28. New Directions Group, Reducing and Eliminating Toxic Substances Emissions: An Action Plan for Canada (unpublished, September of 1991).

29. Ministry of the Environment and Energy, Candidate Substances List for Bans, Phase-outs or Reduction: Multimedia Revision (Toronto: 1993).

30. T. Muir et al. "Application of a Virtual Elimination Strategy to an Industrial Feedstock Chemical - Chlorine" in Volume 2 of the Report of the Virtual Elimination Task Force to the International Joint Commission A Strategy for Virtual Elimination of Persistent Toxic Substances (1993).

31. See: General Accounting Office, Pollution Prevention: EPA Should Reexamine the Objectives and Sustainability of State Programs (January, 1994), p. 19.

32. See: Karen Clark and Barbara Rutherford, CEPA and Environmental Law Enforcement. The Canadian Institute for Environmental Law and Policy, (September 1994).

33. See: Hajo Versteeg, Examining the Current and Proposed Potential of the Canadian Environmental Protection Act to Incorporate Pollution Prevention Principles and Strategies (A Report Submitted to Environment), March 23, 1993.

34. General Accounting Office, Pollution Prevention: Should EPA Reexamine the Objectives and Sustainability of State Programs (January, 1994), p. 24.

35. For example, see: Canadian Labour Congress, A National Pollution Prevention Strategy Endorsed by the CLC National Environment Committee, February, 1992.

36. Paul Emond, "The Case for a Greater Role in the Environmental Protection Field: An Examination of the Pollution Problem and the Constitution" (1972), 10 Osgoode Hall Law Journal 647; Rodney Northey, "Federalism and Comprehensive Environmental Reform: Seeing Beyond the Murky Medium" (1989) 29 Osgoode Hall Law Journal 127; Hajo Versteeg, Examining the Current and Proposed Potential of the Canadian Environmental Protection Act to Incorporate Pollution Prevention Principles and Strategies. A report submitted to Environment Canada, March 23, 1993; Richard Lindgren, "Toxic Substances in Canada: The Regulatory Role of the Federal Government" (1993).

37. Lindgren, ibid., at p. 41.

38. See: Karen Clark and Barbara Rutherford, "The Constitution, Federal-Provincial Relations, Harmonization and CEPA" (Canadian Institute for Environmental Law and Policy, 1994).

39. See: Citizens for Zero Discharge, The Debate is Over It is Time To Act, Citizens' Presentation to the International Joint Commission, 1993 Biennial Meeting, October 23, 1993.

40. Report of the Virtual Elimination Task Force to the International Joint Commission: A Strategy for the Virtual Elimination of Persistent Toxic Substances (Windsor, International Joint Commission, 1993), p. 14.

41. The Pollution Prevention Act of 1990, section 6602(b). 42 U.S.C. 1310(b).

42. Pollution Prevention Act, s. 13102.

43. U.S. EPA, Pollution Prevention 1991: Progress on Reducing Industrial Pollutants (Washington: D.C.: October 1991), p.4.

44. The proposed B.C. Environmental Protection Act (1994), p. 4.

CEPA, CHEMICAL NEW SUBSTANCES, AND BIOTECHNOLOGY

By:

Mark S. Winfield, Ph.D.
Director of Research

and

Burkhard Mausberg, B.Sc
Project Officer
for the
CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY

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INTRODUCTION

The new substances provisions of the *Canadian Environmental Protection Act* (CEPA)[1] are among the most important aspects of the Act. Their significance is due to two principal features. First, the pre-commercial evaluation of new substances is the ultimate preventative activity. Rather than waiting for substances to cause damage to the environment or human health, new substances can be assessed and, if necessary, their use controlled, to prevent such outcomes. Secondly, the CEPA new substances provisions are not limited to the assessment of new chemicals. Other new "substances," such as biotechnology products, can also be assessed through the Act. In fact, CEPA was the first environmental statute in Canada to specifically recognize biotechnology products as distinct category of substances.

The screening of new substances prior to commercialization is an ideal opportunity to apply the principle of pollution prevention and a precautionary approach to the management of potentially harmful substances. These provisions of the Act should be used to provide clear signals to industry regarding the types of new substances which are likely to be approved for use in Canada, and the characteristics of substances which will result in prohibitions or severe restrictions on use. This would provide direction to firms in terms of their investment and research and development decisions.

However, the CEPA new substances provisions, as presently drafted, suffer from a number of significant substantive and procedural weaknesses which make the achievement of this goal difficult. This submission to the Standing Committee on Environment and Sustainable Development reviews these deficiencies and makes proposals for reform in three parts. The first part describes the existing new substances provisions of CEPA. Part Two makes proposals for reform of these provisions regarding new *chemical* substances. The chemical new substances provisions of CEPA were proclaimed to be in force in June 1994.

Part Three deals specifically with *biotechnology* products. Due to the consideration that biotechnology products can be self-replicating life forms, these products raise a number of unique issues with respect to the new substances provisions of CEPA. Regulations to implement the CEPA new substances regime for biotechnology products are still under development after a seven-year consultation process.[2] This submission suggests significant revisions to the way in which CEPA addresses new biotechnology products. These recommendations are contained in a proposal for a new biotechnology part for CEPA, and build upon CIELAP's work on the environmental regulation of biotechnology products over the past decade.[3]

PART I: THE EXISTING CEPA NEW SUBSTANCES PROVISIONS

The Substances New to Canada provisions of Part II (TOXIC SUBSTANCES) of CEPA are complex and challenging. Section 25 of CEPA establishes a Domestic Substances List (DSL), consisting of all substances known to have been manufactured or imported into Canada in a quantity of more than 100 kg in any one calendar year, or in Canadian Commerce or used for commercial manufacturing purposes between January 1, 1984 and December 31, 1986. The establishment of a Non-domestic Substances List, consisting of specified substances other than substances placed on the DSL is also provided for. Amendments to the DSL and Non-dSL must be published in the *Canada Gazette*.[4]

Section 26 of CEPA requires that substances not appearing on the DSL not be manufactured or imported into Canada until required information is provided to the Minister, and the established period for assessing this information has expired. These requirements to provide information to the Minister do not apply to substances which are regulated under other federal statutes which provide for the prior notification of the federal government of the import or manufacture of new substances, and provide to an assessment as to whether the substance is "toxic."[5] Exemptions from the CEPA new substances provisions are also provided for materials incidentally generated in the preparation of the substance,[6] substances produced when a substance undergoes a chemical reaction that is incidental to the use of the substance or that results from storage or from environmental factors,[7] and for substances which do not exceed the maximum quantities exempted from the new substances provisions of the Act.[8]

The information requirements for new substances can also be waived where, in the opinion of the Minister, the information is not needed to determine if the substance is "toxic," the substance is used or manufactured in a location where it is sufficiently contained to protect the environment and human life, or it is not feasible or practicable to obtain the data necessary to generate the information.[9] Notice of waivers granted by the Minister must be published in the *Canada Gazette*.[10]

The information regarding new substances to be provided to the Minister is to be prescribed in regulations made under the Act.[11] These regulations may also define substances or establish groups of substances for the purposes of assessment, including groups of biotechnology products, polymers, research and development substances and substances manufactured for export only.[12] Test and laboratory procedures to be followed in the development of test data may also be prescribed.[13]

The Ministers are required to assess the information provided to them regarding a new substance to determine if it is "toxic."[14] The time period for this assessment may be set through regulation.[15] Where assessment periods are not established in this way, the prescribed assessment period is ninety days.[16] The assessment period can be extended up to the length of the prescribed assessment period where the Minister believes this is

necessary to complete the assessment process.[17]

Once the Ministers have assessed any information provided to them regarding a new substance, and they suspect that the substance may be "toxic," they may permit the import or manufacture of the substance subject to any conditions the ministers specify, prohibit the import or manufacture of the substance, or request additional information from any person regarding the substance for the purpose of assessing its "toxicity."[18] The Minister may vary or rescind any condition or prohibition imposed on a substance which is suspected of being "toxic."[19] Notice of the imposition, variation or rescindment of any condition or prohibition must be published in the *Canada Gazette*.[20]

Where additional information is requested the substance cannot be imported or manufactured until the prescribed period for assessing the substance has expired, or ninety days after the provision of the additional information, whichever is later.[21] In the case of prohibitions, a prohibition expires within two years of its imposition unless notice of a proposed regulation to be made under CEPA is published within the *Canada Gazette*. The prohibition then expires on the date the regulation comes into force.[22] However, the structure of CEPA is such that the substances must be found to be "toxic" before such a regulation can be imposed.

When the Minister has been provided with the information required through CEPA for a new substance, the substance is manufactured or imported into Canada in sufficient quantities, and no conditions on is use made on the basis of a suspicion of "toxicity" (s.29(1)(a)) remain in force," the substance must be added to the DSL.[23]

Where a substance is found to be "toxic," the substance may be added to the Toxic Substances List (TSL).[24] Substances may also be deleted from the TSL where the Governor in Council (cabinet) believe that it is no longer necessary to include the substance on the List.[25] Once placed on the TSL, the substance may be made subject to regulations made under CEPA. The Act grants the Governor in Council the power to impose a wide range of conditions and requirements on TSL substances including complete prohibitions on their manufacturing, use, processing, sale, import or export, or on products containing the substance.[26] However, regulations cannot be made under CEPA if, in the opinion of the Governor in Council, the regulation would regulate an aspect of the substance that is regulated by any other federal statute.[27]

Reviews by a Board of Review of additions to and deletions from the TSL may be requested under CEPA. Reviews of regulations regarding TSL substances may also be requested.[28] The actual establishment of a Board is at the Minister's discretion.[29] Wide standing is provided before Boards of Review[30] and cost awards may be made by Boards.[31] There are, however, no provisions for intervenor funding.

Sections 10-24 of CEPA relate to the disclosure of information. In general, the disclosure of information submitted for the purposes of CEPA is prohibited if requested by the

submitter of the information.[32] However, certain types of information may be released when, in the opinion of the Minister, it is necessary for the purposes of the Act.[33] Information of this type may include summaries of health and safety data, occupational exposure studies, and toxicological, clinical or ecological studies of the substance.[34] Physical or chemical data which would reveal the identity of the substance cannot be released without the permission of the person who provides it.[35] Even when substances are added to the DSL or TSL, where the publication of the explicit chemical or biological name of the substance would result in the release of confidential business information, the name may be masked in a manner to be prescribed through regulations made under the Act.[36]

PART II: CEPA AND NEW CHEMICALS: PROBLEMS AND RECOMMENDATIONS FOR REFORM

1. Introduction

The screening of new substances prior to commercialization is an ideal opportunity to apply the principle of pollution prevention and a precautionary approach to the management of potentially harmful substances. These provisions of the Act should be used to provide clear signals to industry regarding the types of new substances which are likely to be approved for use in Canada, and the characteristics of substances which will result in prohibitions or severe restrictions on use. This would provide direction to firms in terms of their investment and research and development decisions.

However, the CEPA new substances provisions, as presently drafted, suffer from a number of significant substantive and procedural weaknesses which make the achievement of this outcome unlikely. This part of CIELAP's submission to the Standing Committee proposes a number of amendments to strengthen the potential effectiveness of the new substances notification and assessment provisions of CEPA regarding chemical new substances.

2. The Definition and Treatment of "Toxic" Substances under CEPA

Serious deficiencies have been identified with respect to the existing definition of "toxicity" under CEPA. In particular, concerns have been expressed that substances with "toxic" properties (e.g Toluene) have been found to be not "toxic" for the purposes of CEPA, due to CEPA's emphasis on the need to establish evidence of presence in the environment of a "toxic" substance in sufficient quantity or concentration to cause "toxic" effects.[37]

a) *The definition of "toxic" for the purposes of CEPA should be refined to stress the intrinsic characteristics of a substance in terms of its potential to cause harm to the environment or human health, rather evidence of its presence in the environment in sufficient quantity or concentration to cause "toxic" effects.*[38]

CEPA currently does not require that substances found to be "toxic" be placed on the Toxic Substances List.

b) *CEPA should be amended to require that new substances found to be "toxic" for the purposes of CEPA be placed on the Toxic Substances List.*

3. A "Sunrise" Protocol for CEPA

Directly related to the definition of "toxicity" is the development of an appropriate regulatory response once a new chemical has been declared toxic. Currently, there is little guidance as to how the Governor in Council will regulate new substances once placed on the Toxic Substances List. While section 34 of CEPA grants the Governor in Council broad powers to regulate new substances, it does not specify exactly what the regulatory response should be. Due to the likelihood of severe environmental and health effects, substances which are "toxic," persistent and bioaccumulative should not be permitted to be used or manufactured in Canada.[39]

Recommendations:

a) *CEPA should be amended to require that new substances which are persistent, bioaccumulative and "toxic" not be permitted to be manufactured, imported or used in Canada (a "sunrise" clause). Thresholds for persistence and bioaccumulation should be established through regulation. Exemptions to the "sunrise" clause should only be allowed in exceptional circumstances.*

b) *Pollution prevention plans, acceptable to the Minister of the Environment, should be required to be developed by notifying parties for "toxic" substances whose use or manufacture are not prohibited through the "sunrise" protocol, prior to their use or manufacturing being permitted within Canada.*

4. Relationship Between CEPA New Substances Provisions and Other Statutes

CEPA states that substances, for which another act of Parliament provides for the assessment of "toxicity" prior to manufacturing or import, are exempt from the new substances provisions of CEPA. In effect, only substances which are not assessed for "toxicity" under other statutes will be regulated under CEPA. However, the criteria for these exemptions are vague, and do not appear to be being applied stringently.

As the principal federal statute dealing with environmental matters, the role of CEPA in providing a minimum standard for the assessment of new substances, regardless of their intended use, should be affirmed and strengthened. The assessment criteria and procedure, and the range of regulatory options available to the federal government regarding new substances provided by another statute, should be at least equal to CEPA to provide for an exemption from the CEPA new substances requirements.

Recommendations:

(a) *Explicit criteria for establishing the equivalency of other statutes for new substances*

notification and assessment purposes should be included in the CEPA new substances provisions. These criteria should include:

- *requirements that notice be given prior to the import, manufacture or sale of a substance and for an assessment of whether it would be considered "toxic" for the purposes of CEPA;*
- *provisions for public participation in the notification and assessment process equivalent to those contained in CEPA; and*
- *the availability of federal control options for substances found to be "toxic" or suspected of being "toxic," equivalent in scope to those available under CEPA.*

(b) *A provision should be added requiring the Governor in Council to publish a list of statutes considered equivalent to CEPA for the purposes of new substances assessments.*

5. Exemptions from CEPA New Substances Provisions

Currently CEPA exempts a range of substances, including impurities, contaminants and partially unreacted materials, and additional substances produced when a new substance under assessment undergoes a chemical reaction incidental to its use or that results from environmental factors affecting the new substance under assessment.[40] By-products of the production, use, storage or environmental exposure of new substances under assessment have the potential to produce significant health or environmental effects of their own, and therefore should be considered in the assessment of new substances.

Recommendation:

CEPA should be amended to ensure that the assessment of new substances includes consideration of the potential health and environmental effects of by-products arising from the production, use, storage or environmental exposure of a new substance.

6. Status of Substances "Suspected of Toxicity."

The existing provisions of CEPA require that substances must go onto the DSL s.29(1)(a) conditions have been imposed before the end of the assessment period. Such conditions can apparently remain in place indefinitely. This structure provides strong incentives to approve the manufacturing or import of substances suspected of being "toxic," subject to conditions, as if a substance cannot be conclusively shown to be "toxic" and therefore eligible to be added to the TSL, prohibitions on its use or manufacture cannot be maintained beyond a two-year period.

The application of the precautionary principle suggests that substances suspected of being "toxic" should be treated as "toxic" in terms of the available control options, including prohibitions on manufacture, use, import or export, until they can be demonstrated not to be "toxic" for the purposes of CEPA. The possibility of a Board of Review review of the status of a substance prohibited on the basis of a suspicion of "toxicity," might be provided for at the end of the two year period, rather than requiring that the prohibition be replaced with an approval subject to conditions at the end of two years.

Recommendation:

The capacity of the federal government to control the manufacture, or import of substances "suspected of toxicity" should be strengthened. Prohibitions on the import or manufacturing of substances found to be in this category should be permitted to remain in force beyond the two year time limit currently provided by CEPA,[41] so long as the substance continues to be "suspected of toxicity." Requests for Boards of Review on the status of substances "suspected of toxicity" should be permitted two years after the imposition of a prohibition on the import or manufacturing of such a substance.

7. Status of Substances For Which Inadequate Information Exists to Assess "Toxicity."

Section 29 1(c) of CEPA permits the minister to request additional information regarding a substance in order to assess its "toxicity." However, in the event that this additional information proves inadequate to permit an assessment of "toxicity," the minister is not permitted to request additional information, and prohibitions on importing or manufacturing the substance expire, under such circumstances, at the end of the assessment period.[42] These provisions appear to permit the possibility of substances whose "toxicity" has not been fully assessed being manufactured or imported, due to the unavailability of information necessary make such an assessment.

Recommendation:

CEPA should be amended to permit the minister to maintain prohibitions on the importing or manufacturing of a new substance until sufficient information is provided to permit an assessment of the "toxicity" of the new substance. This approach would follow that taken in the Pest Control Products Regulations regarding the registration of pesticides in such circumstances.[43]

8. Assessment of Substances for Export Only

Section 32(1)(a) of CEPA permits the establishment of notification and assessment

categories for substances only intended for export from Canada. This presents the possibility of different, and potentially lower notification requirements and assessment criteria for substances intended for export only, than would be the case for substances intended for domestic use. Such a distinction is inappropriate. Canada should not permit the export of products which have not been fully assessed and approved for use in Canada.

Recommendation:

CEPA should be amended to ensure that new substances intended for export are assessed for "toxicity" in the same way as substances intended for domestic use. The export of products subject to prohibitions on manufacturing or use in Canada should not be permitted. Similarly, substances subject to conditions on use or processing in Canada should not be permitted to be exported for uses or processes which are not permitted in Canada.

9. Assessment Timeframes

Section 32(2) of CEPA provides for a default period of ninety days for the assessment of new substances. The period for the assessment of additional data requested under section 29(1)(c) is also set at ninety days. Given the potential complexity of the data associated with new substances, the default period should be extended.

Recommendation:

The default assessment time limits for assessment contained in sections 32(2) and 29(2) should be extended to a minimum of one hundred eighty days.

10. Field Tests of New Substances Under Assessment

Field tests are situations in which new substances whose toxicity has yet to be fully assessed may be released into the environment, as tests may be necessary to develop data for s.26 notification information packages. Section 32(1)(g) of CEPA permits the development of regulations regarding test conditions, procedures and practices. However, there is no specific requirement to obtain an approval from Environment Canada and Health Canada to conduct a field test, and it is not clear whether a failure to follow the requirements of a section 32(1)(g) regulation would merely invalidate the resulting information, or if such behaviour would constitute an offense under CEPA.

Recommendation:

CEPA should be amended to require that field tests of new substances receive a specific approval under CEPA. The minister should be permitted to approve tests, approve tests

subject to conditions, or to refuse to permit a test. Failure to follow the conditions of a test approval should constitute an offense under CEPA. Failures to follow laboratory procedures required by regulations made under s.32 of CEPA should also constitute an offense under CEPA.

11. Public Participation in Decision-Making

i) Notice and Comment

Opportunities for public participation in the new substances assessment process are extremely limited. Public notices in the *Canada Gazette* are required in four instances:

(a) when information requirements are waived (s.26(5));
(b) when conditions or prohibitions are imposed on substances suspected of being "toxic," (s.29(5));
(c) when substances are added to or deleted from the DSL (s.25(4)) or the TSL; and
(d) when regulations are proposed for TSL substances (s.48).

No public notice is required when information regarding new substances is received by the Ministers (i.e. notifications), or when field tests of new substances are conducted for the purposes of developing data for new substances assessments.

Expanded public notice and comment provisions will ensure that the public is aware of, and has an opportunity to participate in, decisions regarding the approval for use in Canada of substances which may negatively affect the environment and human health. Notice and comment provisions would also improve accountability in the administration of CEPA. In addition, opportunities for public participation may enhance the quality of decision-making by providing members of the public, including non-governmental organizations and members of the academic community, with an opportunity to bring to the attention of CEPA administrators information of which they might not otherwise be aware.

Recommendation:

CEPA should be amended to require public notice in the Canada Gazette when:

* *notification information packages are received by Environment Canada and Health Canada regarding new substances; and*
* *field tests involving the open environmental release of a new substance are proposed.*

In addition to providing notice in the Canada Gazette, the minister should be permitted to provide public notice of an impending decision under CEPA in any other manner which he or she feels appropriate. Public comment periods of not less than sixty days should be

provided following all public notices provided under CEPA.

Additional public notice requirements regarding field tests may be appropriate, as such tests may involve the potential release of substances into the environment whose "toxicity" is yet to be fully assessed. Notice of proposals for field tests might be required to be published in a newspaper of general circulation in vicinity of the test. CEPA s.71(1)(d) provides a precedent for such public notice requirements. Requirements for the direct notification of the owners and occupiers of lands adjacent to a test site should also be included.

ii) Appeals

The current appeal provisions in CEPA are limited and unbalanced. No appeals to a Board of Review are available when substances are added to the DSL (in effect, when there is a finding of not "toxic"). In addition, no appeals are available when information requirements are waived,[44] when the manufacturing or import substances suspected of being "toxic" are approved with conditions, or when prohibitions or conditions on such substances are varied.[45] No appeal processes are apparent regarding the approval of field tests involving open releases of new substances under assessment.

Regulations proposed under s.34 in relation to TSL substances can be the subject of a request for a Board of Review. However, the regulation of substances placed on the TSL is not automatic, and there is no corresponding provision permitting a request for a Board of Review to inquire as to the need for a regulation to prohibit or control the manufacturing, use, processing, sale, offering for sale, import or export of a "toxic" substance if such a regulation has not been introduced by the Governor-in-Council. It should be noted that provisions of the recently enacted Ontario *Environmental Bill of Rights* permit members of the public to request the development of new regulations.[46]

Recommendation:

CEPA should be amended to permit any person to file a notice of objection requesting a Board of Review regarding:

* *the addition of substances to the DSL (s.30);*
* *the waiving of information requirements (s.26);*
* *the approval with conditions or when prohibitions or conditions regarding substances suspected of being "toxic" are varied or rescinded (s.29);*
* *the approval of field tests of new substances, particularly those involving open release into the environment; and*
* *the need for a regulation to prohibit or control the use, manufacture, processing, sale, offering for sale, import or export of a "toxic" substance or a product containing a "toxic" substance.*

Under each of these circumstances a Board of Review should be required to be established, except for when the request can be shown to be frivolous or vexatious. Ministers should be required to respond to notices of objection requesting the establishment of Boards of Review within thirty days of receiving the request.

iii) Intervenor Funding

The Board of Review provisions of CEPA currently provide for final and interim cost awards.[47] However, there are no provisions for the provision of intervenor funding to *bona fide* public interest intervenors in Board of Review proceedings. This represents a serious barrier to the use of the Board of Review process by members of the public. Boards of Review are likely to involve complex technical, scientific and legal issues. Consequently, public interest intervenors may require legal and expert assistance to participate effectively in their proceedings. The need for intervenor funding in public hearing and inquiry processes is well-established,[48] and numerous examples of intervenor funding arrangements exist under federal and provincial legislation, including the *Canadian Environmental Assessment Act*[49] and the Ontario *Intervenor Funding Project Act*.[50]

Recommendation:

CEPA should be amended to provide for intervenor funding assistance to bona fide public interest intervenors in CEPA Board of Review Proceedings. A fund should be established to provide for intervenor funding awards. This might be funded through fines imposed in relation to offenses under CEPA, charges imposed in the use of "toxic" chemicals,[51] and the imposition of user fees for the new substance notifications and assessments.

12. Access to Information[52]

The current provisions of CEPA place significant constraints on the ability of members of the public to access information regarding potentially toxic substances which may be released into the Canadian environment. The paramountcy of the goal of protecting confidential business information (CBI) regarding the nature of potential pollutants, which are a matter public interest and in the public domain, cannot be accepted in principle.

The protection of critical information, particularly regarding the chemical and physical characteristics of substances and the full contents of health and safety, occupational exposure, toxicological, clinical and ecological studies as CBI undermines public accountability for decision-making under CEPA. The lack of full access to information of this nature also limits the capacity of members of the public to comment substantively on

information regarding new substances, to assess the adequacy of proposed control measures, and to determine whether requests for Boards of Review are appropriate.

Environment Canada interprets CEPA section 20 as requiring it to keep such information confidential, unless a request for information is submitted under the *Access to Information Act* (AIA) and the Information Commissioner determines that the information is not confidential.[53] The process of applying for information under the AIA is slow, unwieldy and likely to be unable to provide adequate responses to public requests for information in the context of the timeframes provided by CEPA for the assessment of new substances.

CEPA's provisions regarding the protection of confidential business information are much wider than is the case in corresponding U.S. legislation. In the United States, only "trade secrets" can be kept confidential. "Trade secrets" include information such as formulas or compounds which are used in a business, know only to that business and its employees and which give that business a commercial advantage over competitors.[54] A similar standard should be employed in CEPA.

Furthermore, confidentiality requests should not be permissible for information relating to substances which may be released into the environment, either through waste streams or products, or for information relating to the environmental effects resulting from the use or processing of the substance. Confidentiality claims should also be disallowed regarding information regarding potential occupational exposure to new substances under assessment.[55]

Recommendations:

To avoid abuse of its confidentiality provisions, CEPA should be amended to provide that:

* *the definition of what can be kept confidential be narrowed to include only "trade secrets;"*

* *the claimant for confidentiality be required to provide supportive evidence of confidentiality when making a claim;*

* *requests for confidentiality on the identities of substances which will, or may be, released into the environment, not be permitted;*

* *requests for confidentiality should not be permitted regarding information on toxicology, ecological effects, epidemiology or health and safety studies;*[56] *and*

* *there be a public appeal process regarding determinations that information is confidential.*

13. Conclusions

The new substances provisions of CEPA are potentially one of the Act's most important components. The screening and assessment of new chemical substances prior to their release into the environment is the ultimate preventative step. However, in order to be fully effective, the chemical new substances provisions of CEPA require a number of amendments.

In particular, the relationship between the new substances provisions of CEPA and similar provisions contained in other statutes must be clarified, and the status of the CEPA provisions as providing a minimum assessment standard for all new substances affirmed. In addition, opportunities for public participation in the new substances assessment and approval process must be strengthened, as well as public access to information regarding new substances. The Act must also be amended to widen the scope of the assessment of the potential environmental and health effects of new chemical substances, strengthen the ability of the federal government to deal with substances "suspected of toxicity" or for which inadequate information to assess exists, provide clear provisions regarding the authorization and regulation of field tests of new substances, provide for more realistic assessment time frames, and to ensure the full assessment of substances intended for export from Canada.

PART III: CEPA AND NEW PRODUCTS OF BIOTECHNOLOGY: PROBLEMS AND RECOMMENDATIONS FOR REFORM

1. Introduction

The new substances provisions of CEPA are designed to include biotechnology products as well as new chemicals. However, the regulation of new biotechnology products presents a number of special challenges beyond those provided by new chemical substance. Indeed, Environment Canada and Health Canada have recognized biotechnology products as a unique category of new substances. The departments have been developing a separate notification regulation of biotechnology products under section 32 of CEPA. A commitment to establish a national regulatory regime to address the environmental risks of the biotechnology industry by 1995 was made in the federal government's Green Plan.[57]

i) What is Biotechnology?

Biotechnology is defined in CEPA as:[58]

> "the application of science and engineering in the direct or indirect use of living organisms or parts or products of living organisms in their natural or modified forms."

Such a broad definition includes a wide range of activities, many of which are hardly new or revolutionary. Fermentation in the making of beer or the biological processes used in sewage treatment plants, for example, can be considered applications of biotechnology. Most agricultural practices could be described in the same way.

Modern biotechnology, however, is different from these traditional practices. All living things have the same genetic material called DNA (deoxyribonucleic acid), the hereditary information code which determines life. What makes each species, and each member of a species, unique, is the distinctive arrangement of its DNA. Since the early 1970s, scientists have been able to take this genetic material from one species and implant it into an unrelated one. By doing so, they can add very specific characteristics to plants, animals, and microorganisms, resulting in genetic combinations which otherwise would not naturally occur. This is called genetic engineering and it is fundamentally different from traditional genetics where scientists could only breed closely related species. According to one commentator,

> "[T]he principal significance of the new technology was that it made possible the transfer of genes between species with considerable specificity and ease. It,

therefore, removed the specific barriers of conventional genetics."[59]

Genetic engineering means that the desirable characteristics or attributes of one organism or species, whether a plant, or animal, or bacteria can be transferred to another to create new life forms or "genotypes." These new life forms, in turn, can pass on the new characteristics to their offspring.

ii) The Biotechnology Industry and Its Applications

The discovery and refinement of genetic engineering techniques has been followed by the emergence of a "biotechnology" industry over the past decade. Applications of biotechnology involving the use of both engineered and naturally occurring life forms are now approaching the commercialization stage. Many of the applications involve the potential or deliberate release of biotechnology products into the environment. The fields in which biotechnology applications involving the environmental release of biotechnology products are under development include the following:

a) Agriculture

The range of potential applications of biotechnology to agriculture are enormous. They include the development modified engineered (transgenic) crops, new applications of naturally occurring and genetically engineered microorganisms (GEMs), and animal health and production products.

Transgenic crops: Using a variety of techniques, scientists are now able to breed crops with specific characteristics or traits. Some new crop strains are being developed to improve crop nutritional and growth characteristics. However, the overwhelming majority of the transgenic crops presently under development in Canada are to increase resistance to specific pesticides.[60] Monsanto, for example, is developing canola (a plant used to make vegetable oil) to be resistant to its herbicide glyphosate. This would permit use of the herbicide against weeds without affecting that specific strain of canola.

GEMs: One of the earlier applications of biotechnology was the use of microbes that can be sprayed on temperature-sensitive plants and crops to help protect them from frost damage. This so-called "ice-minus" bacterium allows longer growing seasons and a reduction in crop loss due to late frosts. The use of microbes to increase nitrogen fixation in soil is also under investigation.[61]

Animal Products: Biotechnology products currently under development include drugs to induce growth in animals. In addition, the controversial hormone recombinant bovine Somatotropin (rbST), produced by genetic engineering techniques, can be injected into cows to substantially increase their milk production. The development of animal vaccines using biotechnology techniques to fight chronic cattle diseases such as shipping fever and

bovine virus diarrhoea is also taking place.

b) Mining and Petrochemicals

There are a variety of biotechnology applications by the mining industry under development. Microorganisms may, for example, be able to leach minerals such as copper, nickel, and gold from ores and tailings in concentrations that could not be extracted economically by traditional means.[62]

With respect to petrochemicals, the desulfurization of coal and crude oil through the use of modified microorganisms is currently under investigation.[63] The use of microbes to enhance oil recovery, to produce fuel, and in the production of enzymes and specialty chemicals is also being explored.[64]

c) Waste water Treatment

New biotechnology products such as microorganisms may also be used to accelerate processes of degrading and removing toxic substances from inoculated sludge at waste water treatment facilities.[65] The Canada Centre for Inland Waters in Burlington, and the National Research Council's Biotechnology Research Institute in Montreal, for example, have research programs oriented toward the use of biotechnology for the treatment of municipal and industrial waste water.

d) Bioremediation

Other uses that may further environmental protection goals include the creation and use of microorganisms capable of de-toxifying hazardous waste or rendering organic pollutants such as polychlorinated biphenyls (PCBs) less toxic. Similarly, new and naturally occurring life forms may be able to clean up oil and other chemical spills, providing the foundation for new waste management technologies.[66]

e) Forestry

Canadian forestry companies are currently undertaking biotechnology research in three main areas. These are pulp and paper manufacturing, the regeneration of harvested forests, and the protection of existing and new forests. In the pulp and paper sector, research is under way into new enzyme technologies, allowing for significant reductions in the use of chemical bleaching agents. Research into techniques related to reforestation is being pursued vigorously in a number of laboratories across Canada. Methods have been developed to rapidly produce thousands of genetically-improved trees. This is to facilitate

faster reforestation. In addition, researchers at Forestry Canada are developing technologies for biological pest control as alternatives to synthetic chemical treatments.[67]

f) Fisheries

A number of applications of biotechnology to fisheries are under development to increase the tolerance of fish to environmental stresses, and the increase their rate of growth. Examples include the modification of Atlantic salmon to carry the "antifreeze gene" taken from winter flounder, and the modification of coho salmon to carry a growth hormone gene from sockeye salmon.[68]

iii) The Unique Risks of Biotechnology Products

Biotechnology products present a number of special environmental and health risks which distinguish them from traditional chemical substances. Two major areas of concern have been identified in this regard:

(a) Many biotechnology products include life-forms which are self-replicating. Once released into the environment, they can reproduce, spread and mutate and transfer genetic material. The control of biotechnology products, and their genetic material, once in the environment, will therefore be difficult, if not impossible.

(b) The technologies employed in the development of many new biotechnology products have only emerged over the past twenty years (especially recombinant DNA and cell fusion technologies). The evaluation of such products for potential environmental damage is surrounded by a great deal of uncertainty. Indeed, the scientific literature reflects wide concerns regarding the lack of adequate methodologies and data to properly assess the environmental and health effects of the products of biotechnology.[69]

Methods of predicting the consequences of deliberate introduction of new life forms in the environment are still under development. The potential risks associated with biotechnology products are often described as being of a "low probability, high consequence risk."[70] In other words, although the chances of something going wrong may be very slight, if something does go wrong, the ecological consequences may be tremendous. As a result, we must ask *not* only whether something may go wrong, but also what is the present capability to address the consequences if it does.[71]

These concerns are reinforced by the consideration that, in many cases, biotechnology products *must* survive, grow and multiply in the environment in order to fulfil their

intended functions. In general, the environmental risks which have been associated with the release of biotechnology products into the environment are predicted on the basis of extension of past experiences with the introduction of "exotic" species, such as zebra mussel, dutch elm beetle, common sparrow, gypsy moth and various species of plants, including the purple loosestrife, into existing ecosystems.[72] The specific environmental risks which have been identified in relation to biotechnology products include:[73]

* the creation of new pests, such as the escape of a transgenic salt tolerant rice from cultivated fields into estuaries;
* the enhancement of the effects of existing pests or creation of new pests through hybridization or gene transfer to related plants or microorganisms;
* the enhancement of the effects of existing pests as a result of the selective pressures provided by plants modified for pest resistance or intensified pesticide arising in conjunction with the modification of plants for pesticide resistance;
* infectivity, pathogenicity, toxicity or other harm to non-target species, including humans;
* disruptive effects on biotic communities, resulting in the elimination of wild or desirable natural species through competition or interference;
* adverse effects on ecosystem processes and functions, such as nutrient cycling;
* incomplete degradation of hazardous chemicals by microorganisms employed in bioremediation, and waste water treatment, leading to the production of even more toxic by-products.

These specific risks sometimes overshadow the more general risk of reducing biological diversity in any given ecosystem. Introduced species may, for example, disturb food-chains or habitats, which in turn will affect biodiversity.[74] Biotechnology can also threaten the biodiversity through its implicit drive to breed uniformity in plants and animals, and by furthering and encouraging monocultures.

It is important to note that these environmental and health risks are not limited to the introduction of genetically engineered or modified organisms. Naturally occurring organisms can behave as "exotic" species when introduced into ecosystems of which they are not native inhabitants as well. In addition, the introduction of a naturally occurring species into a natural habitat can have disruptive effects if the species is introduced in very high concentrations or quantities. It has also been argued that certain naturally occurring species of microorganisms that have potential to be used in bioremediation may be opportunistic human pathogens.[75]

iv) Biotechnology and "Toxicity"

The "toxicity" test forms the basis for CEPA's regulation of new substances. New substances must be found "toxic" under the definition employed by CEPA in order to be regulated under the Act. A number of problems have been identified with the definition

and application of the concept of "toxicity" under CEPA in relation to chemical substances.[76] Furthermore, the "toxicity" standard, as it is presently applied in the context of chemical substances appears to be too narrow an evaluative structure in relation to the potential scope of the effects of the use of biotechnology products. In addition, it an be excessively stringent test in relation to the level of uncertainty regarding the environmental and health effects of these products. This is especially true with respect to the potential long-term, indirect and cumulative environmental and health risks associated with biotechnology products.

v) Biotechnology and Federal Jurisdiction

The "toxic" standard employed in CEPA was largely developed for the purpose of establishing federal constitutional authority to regulate potentially harmful chemical substances. It was intended to define a distinct and bounded category of substances to be controlled through the federal parliament's general power to legislate for the Peace, Order and Good Government of Canada.[77]

However, the federal authority to regulate biotechnology products may not require the establishment of "toxicity," as is the case with chemical products. The federal parliament's capacity to legislate on new subjects of national significance, such as aeronautics,[78] radio communications,[79] nuclear energy,[80] and the national capital area,[81] is well established. Biotechnology products which are intended to be, or may be, released into the environment, particularly those involving the application of recombinant DNA and cell fusion technologies seem to fall within this category.[82] Biotechnology products are a distinct and bounded category of subjects and therefore would appear to be able to meet the test of "singleness, distinctiveness and indivisibility," clearly distinguishing them from matters of provincial concern.[83]

In addition, a federal notification, assessment, and registration system for biotechnology products would appear to be something whose "scale of impact on provincial jurisdiction is reconcilable with the fundamental distribution of legislative power under the Constitution."[84] It is also unlikely that an effective notification, assessment and registration system could be established by the provinces acting individually or cooperatively.[85] Given the status of biotechnology products as living organisms capable of being transported and of reproducing, the failure of one province to cooperate would carry with it potential adverse consequences for residents of other provinces. Those few provinces which have considered the regulation of biotechnology products appear to concede primary responsibility for their assessment and approval for use in Canada to the federal government.[86] A division of responsibility similar to that which has emerged regarding pesticides, in which the federal government assesses and registers products for general use in Canada, and the provinces authorize specific applications,[87] appears to be emerging for biotechnology products which may be released into the environment.

These consideration support the conclusion that the federal government has the constitutional authority regulate biotechnology products in Canada through its power to legislate of the Peace, Order and Good Government of Canada, without having to establish that they are "toxic" for the purposes of CEPA. Federal jurisdiction over Agriculture,[88] Fisheries,[89] Trade and Commerce,[90] and criminal law in relation to public health,[91] provide additional bases for the establishment of federal regulatory authority over biotechnology products.

vi) Biotechnology and CEPA

The disconnection of federal regulatory authority over biotechnology products from the need to establish "toxicity" would provide a number of advantages. The health and environmental effects of new biotechnology products could continue to be assessed as they are now under CEPA. However, a firm establishment of "toxicity" would not be required for the federal government to take regulatory action to prohibit or impose conditions on the processing, use, manufacture, sale, offering for sale, import or export of new biotechnology products or products containing new biotechnology products. The proposal of this more flexible standard reflects the level of uncertainty which currently exists regarding the potential environmental and health effects of biotechnology products.

Furthermore, if the federal role is not limited to regulation on the basis of the establishment of "toxicity," the assessment and regulatory process for biotechnology products could be widened to include broader considerations of the potential environmental and human health effects of these new products. Such effects could include the long-term direct and indirect cumulative environmental effects of the commercial scale use of a biotechnology product. This would more effectively capture the range of possible environmental and health effects which have been identified with respect to biotechnology applications in relation to deliberate or accidental releases into the environment.

This approach would also permit the range of factors to be considered in the evaluation of biotechnology products to be expanded. Concerns have been expressed by a wide range of stakeholders regarding the value and purpose of many of the emerging applications of biotechnology. It has been argued, for example, that the modification of crops for resistance to specific herbicides will entrench the dependance of agricultural production on external chemical inputs. This may result in a further narrowing of the genetic base employed for agricultural purposes, thereby undermining efforts to development more environmentally sustainable agricultural practices.[92] Similarly, it has been contended that the development of genetically modified faster growing trees to be used in reforestation efforts would address a symptom, rather than the cause, of the problem of the overharvesting of trees.[93]

The recent controversy over the approval for use in Canada of rbST has demonstrated in

the inability of the existing regulatory system for biotechnology products, with its narrowly defined focus on safety, to even consider wider policy issues of this nature.[94] The need to widen the range of factors considered in the assessment of biotechnology products was reflected in the recommendations of the Standing Committee of the House of Commons on Agriculture and Agri-Food in its April 1994 report rbST in Canada.[95] This stress on the consideration of the wider environmental, ethical and social impacts of biotechnology applications is a reflection of the potential power of the technology and the lack of consensus within Canadian society regarding the appropriateness of many of the applications of biotechnology which are emerging.

The unique characteristics of many biotechnology products as life forms, the level of uncertainty regarding the assessment of their potential environmental and human health impacts, and lack of consensus regarding the value of many of their applications makes apparent the need to address these products differently from chemical new substances under CEPA. A new and separate part of CEPA should be enacted to deal specifically with biotechnology products. This part would, in effect, establish a federal registration and regulatory system for biotechnology products which may enter the Canadian environment or be exported from Canada.

2. A New Biotechnology Part for CEPA

i) Introduction

The proposed new Biotechnology Part for CEPA would provide for the evaluation and listing for use, manufacture, processing, sale, offering for sale, import and export of biotechnology products, and products containing new biotechnology products which may be released into the environment. The proposed part follows the notification and assessment structure of the existing CEPA new substances provisions. However, the proposed section would expand the range of evaluative criteria employed in the assessment of biotechnology products, and remove the need to establish "toxicity" in order for the federal government to control the use of a biotechnology product.

ii) Scope

As Canada's principal environmental protection statute, CEPA should provide a framework for the evaluation of all biotechnology products which may be released into the environment. This would include all releases of genetically engineered organisms, and releases of naturally-occurring organisms into habitats in which they do not occur naturally, or in quantities or concentrations beyond those in which they naturally occur. Enabling provisions for notification and assessment requirements would be established to cover all stages of product development in which environmental releases might occur, from laboratory research to commercialization.

The existing provisions of CEPA require that the triggers for the application of the CEPA New Substances provisions (s.26(3)), additions to the DSL (s.30) and the development of notification groups in new substances regulations (s.32(1)h) be expressed in terms of quantities. Given the nature of most biotechnology products self-replicating life forms, such triggers are inappropriate for biotechnology products.[96] The proposed biotechnology Part would permit the use of non-quantity based triggers for biotechnology products.

iii) Relationship Between CEPA and other Statutes Regulating Biotechnology Products

Potential releases of biotechnology products into the environment are currently regulated under a number of federal statutes administered by a variety of departments. Among the most important of these are the *Pest Control Products Act*,[97] the *Seeds Act*,[98] the *Fertilizers Act*,[99] the *Plant Protection Act*[100] and the *Fisheries Act*.[101] However, very few of the statutes under which other departments propose to use in the regulation of biotechnology products, appear to be able to meet even the existing CEPA s.26(3) exemption criteria.[102] As is proposed with respect to new chemicals, biotechnology products could continue exempted from the requirements of the CEPA notification and assessment process, if they are regulated through another statute which clearly provides for an equivalent process.

However, the status of CEPA as providing the minimum standards for the assessment of biotechnology products should be affirmed and strengthened. Explicit criteria for establishing the equivalency of other statutes for biotechnology notification and assessment purposes should be included in the proposed CEPA biotechnology part. These criteria should include:

* requirements that notice be given prior to the testing, import, manufacture, use or sale of the substances and for an assessment of the:
  - purpose;
  - efficacy;
  - direct, indirect and cumulative environmental and human health impacts; and
  - availability of alternatives to the biotechnology product;
* provisions for public participation in the notice and assessment process equivalent to those contained in the CEPA biotechnology part; and
* the availability of federal control options equivalent in scope to those available under the CEPA biotechnology part.

A provision should also be included requiring the Governor in Council to publish a list of statutes considered equivalent to CEPA for the purpose of the assessment of new

biotechnology products.

iv) Information Requirements

The biotechnology Part of CEPA would contain a section similar to the existing provisions of s.32 of CEPA, permitting the development of regulations establishing information requirements for biotechnology products. These requirements would include information regarding:

* the purpose for which the biotechnology product has been developed;
* the effectiveness of the product for its intended purpose;
* the method of use and mode of action of the product;
* biological and ecological characteristics of the biotechnology product;[103]
* potential immediate and long-term direct and indirect environmental and human health effects of the biotechnology product, including the cumulative effects of commercial scale use and impacts on biodiversity;[104]
* availability and effectiveness of monitoring, control, waste treatment and emergency response plans with respect to the biotechnology product;[105]
* the availability of alternative means of achieving the product's purpose which may pose lower environmental and health risks; and
* any other information which the minister determines necessary to assess the potential environmental and human health impacts of the biotechnology product.

These requirements are based on those currently under development by Environment Canada and Health Canada for the CEPA biotechnology notification regulation[106], Agriculture and Agri-Food Canada for the environmental assessment of genetically modified plants[107] and the United States Environmental Protection Agency for the assessment of biotechnology products under the *Toxic Substances Control Act*.[108] However they are also expanded to include information regarding the purpose, effectiveness, availability of alternatives, potential long-term direct, indirect and cumulative environmental and human health effects of the use of the biotechnology product.

The Government of Canada's acceptance of the need for the assessment of the effectiveness of biotechnology products was affirmed in the its August 1994 response to the Standing Committee on Agriculture and Agri-Food's report rbST in Canada[109] and a "merit" test is currently applied in the registration process for pest control products under the *Pest Control Products Regulations* made under the *Pest Control Products Act*.[110] The inclusion of the consideration the purpose, availability of alternatives and long-term indirect and cumulative environmental and human health effects is intended to bring principles widely accepted as components of environmental assessment procedures[111] into the assessment of biotechnology products. This is to provide a means of addressing the range of concerns regarding the value, purpose and potential

long-term environmental and health effects of biotechnology products which may be released into the environment, that have been expressed by many stakeholders.[112]

v) Field Tests and Laboratory Procedures

As noted in the chemical new substances part of this submission, field tests involve potential releases of new substances into the environment whose potential environmental and human health effects have yet to be fully assessed and evaluated. As is proposed for new chemical substances, a separate section regarding the field tests of biotechnology products should be included in the biotechnology part of CEPA.

Field tests of new biotechnology products should require a specific approval under CEPA. The minister should be permitted to approve tests, approve tests subject to conditions, or to refuse to permit a test. Failure to follow the conditions of a test approval should constitute an offense under CEPA. Notice of proposals for field tests should be required to be published in a newspaper of general circulation in vicinity of the test.[113] Requirements for the direct notification of the owners and occupiers of lands adjacent to the test site should also be included. A comment period of not less than sixty days should follow notice of a proposed field test. Mechanisms to provide for the filing of notices of objection and the establishment of Boards of Review in the event that members of the public object to the conduct of a field test are also required.

This section should also establish the capacity of the Governor-in-Council to make regulations regarding laboratory procedures regarding biotechnology products. Failures to follow laboratory procedures required by regulations should constitute an offense under CEPA.

vi) Assessment and Listing Process

a) Public Participation

The public participation provisions of the biotechnology product assessment process would parallel those proposed for the assessment of new chemical substances under CEPA. This would include:

(a) public notification when applications for the approval of the manufacture, use, import or export of new biotechnology products, or products containing new biotechnology products are made, in the *Canada Gazette.*
(b) provision of a public comment period of not less than ninety days following the notice;
(b) public access to the information submitted in response to the to the information requirements regarding new biotechnology products in a manner consistent with

the principles outlined in section **11** of the Chemical New Substances section (**Part II**) of this submission.

b) Assessment Criteria

The proposed biotechnology part would outline the criteria to be considered by the minister in assessing a new biotechnology product. In determining whether to approve, approve with conditions or prohibit the use, manufacturing, processing, sale, offering for sale, import or export of a new biotechnology product or products containing the new biotechnology product, the minster should consider:

* the information received from the proponents;
* comments received from members of the public; and
* information available from any other source regarding:
  - the purpose for which the biotechnology product has been developed;
  - the effectiveness of the product for its intended purpose;
  - the biological and ecological characteristics of the biotechnology product
  - the potential immediate and long-term direct and indirect environmental and human health effects of the product, including the cumulative effects of commercial scale use and impacts on biodiversity;
  - the availability and likely effectiveness of monitoring, control, waste treatment and emergency response plans with respect to the product; and
  - the availability of alternative means of achieving the product's purpose which may pose lower environmental and health risks.

c) Approvals

At the conclusion of the public comment and product assessment period, the minister would be permitted to:

* approve manufacture, use, processing, release or discharge into the environment, sale, offering for sale, import or export the new biotechnology product and products containing the new biotechnology product without conditions:
* approve the manufacture, use processing, release or discharge into the environment, sale, offering for sale, import or export of the new biotechnology product and products containing the new biotechnology product subject to any conditions which the minister chooses to impose; or
* impose a total, partial, or conditional prohibition of the manufacture, use, processing, release or discharge into the environment, sale, offering for sale, import or export of the biotechnology product or a product containing the new biotechnology product.

Products whose assessment demonstrates:

* the potential for harm to human health or the environment;
* ineffectiveness for their intended purpose;
* the availability of alternatives which pose a lower potential for harm to the environment or human health; or
* whose intended purpose is found to not to serve the public interest,

should not be approved for use or manufacturing in Canada.

Products approved without condition would be placed on a Biotechnology Domestic Substances List. Products approved subject to conditions could be placed on a Biotechnology Conditional Domestic Substances List. Products subject to prohibitions would be placed on a Prohibited Biotechnology Substances List. Approvals, conditional approvals and prohibitions could be varied by the minister if new information regarding the biotechnology product becomes available. Notice of the minister's intention to vary such conditions should have to be provided in the *Canada Gazette*, and be followed by a public comment period of not less than ninety days.

d) Notice of Approval

Notice of the Minister's decision would be provided in the *Canada Gazette*, to the applicant, and to any person who made a comment during the comment period. A decision to approve or approve with conditions would not take effect for period of thirty days. This would provide an opportunity for the filing of notices of objection by any person. Notice and opportunities to file notices of objection should also be available when variations to approvals, approvals with conditions and prohibitions are proposed.

e) Appeals

The filing of a notice of objection would be the first step is seeking a Board of Review regarding the minister's decision regarding a biotechnology product. The procedures for Boards of Review regarding biotechnology products would follow those proposed for Boards of Review regarding chemical new substances (**Part II 7.2.** and **7.3.** of this paper) Boards would have to be established unless the request is frivolous or vexatious, approvals should be suspended until any notice of objection is resolved, and intervenor funding should be provided for *bona fide* public interest intervenors

viii) Biotechnology Environmental Release Database

The biotechnology part of CEPA should provide for the establishment of a data-base on

the environmental release of all biotechnology products in Canada. Such a data base would be of assistance to governments, researchers, and other members of the public in assessing the overall use and effects of biotechnology products released into the Canadian environment. All environmental releases should be required to be entered into the data base, and members of the public should have direct access to the data base.

3. Conclusions

Biotechnology products, being self-replicating life forms, represent a unique category of new substances, distinct from chemical new substances. Therefore they should be dealt with through a new separate part of CEPA. This part would follow the structure of the existing new substances provisions. However, the scope of the evaluative criteria would be expanded to include factors beyond the assessment of "toxicity," as currently defined for the purposes of CEPA. This is to reflect to the potential range of environmental and health impacts associated with biotechnology products and the concerns which have been expressed by many stakeholders regarding the merit and value of many of these products.

In addition, "toxicity" would not have to be established in order to justify the exercise of federal regulatory authority over biotechnology products. This approach is proposed to take into consideration the level of uncertainty which currently exists regarding the assessment of the potential environmental and health effects of biotechnology which may enter the environment. Furthermore, in a manner consistent with CIELAP's proposals regarding the chemical new substances provisions of CEPA, the status of CEPA as providing the basic model of the evaluation of the effects of environmental releases of biotechnology would be affirmed and strengthened. Opportunities for public participation in decision-making regarding biotechnology products would also be increased.

This proposal for the establishment of a separate biotechnology part of CEPA is intended to provide the basis of a regulatory structure for biotechnology products which would ensure the protection of environmental integrity and human health, and strengthen public confidence in the government of Canada evaluative and regulatory processes for these products.

ENDNOTES

1.The Canadian Environmental Protection Act, 1988, ss.25-32.

2.See July 1993 Draft Regulations.

3.See, for example, The Regulation of Biotechnology (Toronto: Canadian Environmental Law Research Foundation, 1984), Biotechnology Policy Development (2 Vols.) (Toronto: Canadian Institute for Environmental Law and Policy, 1988).

4.CEPA, s.25(4).

5.Ibid, s.26(3)(a).

6.Ibid, s.26(3)(b) and (c).

7.Ibid, s. 26(3)(d).

8.Ibid., s.26(3)(e).

9.Ibid, s.26(4).

10.Ibid., s.26(5).

11.Ibid, s.32(1)(c).

12.Ibid., s.32(1)(a).

13.Ibid s.32(1)(g).

14.Ibid., s. 28(1).

15.Ibid., s.32(1)(f).

16.Ibid., s.32(2).

17.Ibid., s.28(4).

18.Ibid., s.29.

19.Ibid, s. 29(3).

20.Ibid., s.29(5).

21.Ibid., s.29(2).

22.Ibid., s.29(4).

23.Ibid., s.30.

24.Ibid., s.33(1)

25.Ibid., s.33(3).

26.Ibid., s.34.

27.Ibid., s.34(2).

28.Ibid., s.48.

29.Ibid., s.89(1).

30.Ibid., s.91.

31.Ibid., s.94.

32.Ibid., s.20(1).

33.Ibid., s.20(4).

34.Ibid., 20(2)(f).

35.Ibid., s.20(2).

36.Ibid., s.31.

37.See, for example, Canadian Environmental Protection Act Priority Substances List Assessment Report No.4: Toluene (Ottawa: Environment Canada, Health and Welfare Canada, 1992).

38.A possible amendment of CEPA s.11 might be to require that a substances be considered "toxic" for the purposes of CEPA if it has any one, or combination of, the following characteristics:

- has or may have an immediate or long-term harmful effect on the environment;
- constitutes or may constitute a danger to the environment on which human life depends; or
- constitutes or may constitute a danger to human life or health.

A supplemental submission to the Standing Committee on Environment and Sustainable Development will be developed by the Canadian Environment Network Toxics Caucus to address this issue in detail.

39.On this issue of the environmental effects of persistent toxic substances see for example, A Prescription for Healthy Great Lakes: Report of the Program for Zero Discharge (Toronto and Ann Arbor: Canadian Institute for Environmental Law and Policy, National Wildlife Federation, 1991), esp.ch.2 and 3.

40.Ibid., ss.26(3)(b), (c), and (d).

CEPA AND EMERGENCY PLANNING

By

Chris Rolfe
for the
WEST COAST ENVIRONMENTAL LAW ASSOCIATION

September 1994

The Need for Emergency Planning

Facilities all across Canada store or use hazardous chemicals that, when released accidentally, have a potential to cause catastrophic accidents such as the one that occurred in Bhopal, India. Avoiding such catastrophic accidents, and informing local emergency planners and citizens as to the risks of such accidents, requires a mix of policies ranging from requirements for reporting of hazardous chemical inventories to programs that ensure facilities evaluate risks associated with their use of hazardous substances and take steps to reduce unacceptable risks.

It has been suggested elsewhere that the National Pollutant Release Inventory (NPRI) could be used to gather information on maximum quantities of potentially dangerous substances stored at facilities and that Environment Canada should identify substances with the potential to cause catastrophic releases and appropriate thresholds for reporting such substances. However, while information on the amount of these substances stored at different facilities is an integral part of emergency preparedness, it is not in itself sufficient to prevent accidents and ensure appropriate responses when accidents do occur.

In the United States the federal government has undertaken an number of initiatives to ensure that both facilities and communities are prepared for catastrophic accidents that could occur. In 1986 Congress passed the *Emergency Planning and Community Right-to-Know Act* requiring states to establish state and local emergency planning groups which would develop chemical emergency response plans for each community. Facilities are required to report their inventories of hazardous substances to these local and state emergency planning groups as well as to local fire departments. This information forms the foundation of both community emergency response plans and public-industry dialogue on risks and risk reduction.

Although the requirements of the *Emergency Planning and Community Right-to-Know Act* were a step forward in the U.S., and represent a more comprehensive planning regime than currently exists in Canada, Congress, various states and academics recognized that reporting of hazardous chemical inventories and development of community emergency response plans was only a half measure.[1] This resulted in amendments in the *Clean Air Act* creating a general duty for facilities to identify hazards that may result from releases, and to develop risk management plans. Pursuant to the *Clean Air Act* the U.S. Environmental Protection Agency has developed regulations requiring facilities at which regulated substances are present in more than a threshold amount to prepare and implement risk management plans. The plans are registered with the Environmental Protection Agency, sent to local emergency planning groups, and made available to the public.

In contrast, Canadian programs for emergency risk preparedness are still extremely limited. The Major Industrial Accidents Council of Canada (MIACC) has developed a number of national standards and guidelines for emergency preparedness, including Guiding Principles on Joint Municipal and Industrial Emergency Preparedness. While MIACC's work is valuable it is limited in that MIACC cannot require facilities to develop emergency response plans or risk management plans, and the public has no right to review such plans. Although some provincial laws may allow provincial ministries of environment to require development of contingency plans,[2] the application of these laws appears to be sporadic, and provinces may reluctant to impose such requirements in relation to federal lands or undertakings. For instance, a review of emergency preparedness of private and public sector (including federal) facilities in the Fraser River estuary found significant weakness in the emergency preparedness of most organizations.[3]

While recognizing that emergency preparedness is an area of mixed jurisdiction, it is essential that the federal government take a role in this area. Many of the facilities where catastrophic accidents are most likely to take place are under federal jurisdiction. For instance, federal lands managed by port corporations are often the site of major chemical manufacturing and storage plants in close proximity to residential populations. Similarly, federal undertakings such as railway yards and military depots are sites which are both likely sources of catastrophic releases and are under clear federal jurisdiction. The federal government also has significant jurisdiction in relation to industrial facilities not on federal land and which are not federal undertakings on the basis of various heads of federal power including, "peace, order and good government" and "seacoast and inland fisheries."

Requiring development of emergency preparedness plans will pose little or no burden on industries which have shown responsibility and have already developed plans. Plans already developed following MIACC criteria would likely meet, with few or no additions, the standards of any federal mandatory planning requirements. However, making planning requirements mandatory and making plans public would ensure more comprehensive plans.

Recommendations

We recommend that CEPA be amended to mandate a program of environmental emergency planning and responses. In addition:

(1) Environment Canada should identify a list of substances with appropriate threshold quantities that have the potential to cause catastrophic accidents if accidentally released.

(2) For chemicals stored in above threshold quantities facilities should be required to report the maximum and average quantity of the chemicals they store on site. This information should be reported to local fire department and emergency planning bodies as well as made available to the public.

(3) Federal undertakings and facilities on federal land that meet or exceed the thresholds should be required to develop risk management and emergency preparedness plans.

(4) The federal government should work with provinces, and if necessary unilaterally, to develop mandatory emergency planning requirements for all other industrial facilities.

ENDNOTES

1. Abrams, Robert, and Ward, Douglas, "Prospects for Safer Communities: Emergency Response, Community Right to Know, and Prevention of Chemical Accidents" (1990), 14 Harvard Environmental Law Review 135; Christiansen, Steven J. and Urquart, Stephen H., "The Emergency Planning and Community Right to Know Act of 1986: Analysis and Update" (1992), 6 Brigham Young University Journal of Public Law 235.

2. See for instance, s. 10 the B.C. Waste Management Act.

3. Bennett Environmental Consultants Ltd., Emergency Plan Review and Linkage Study, Report to Fraser River Estuary Management Program, Environmental Emergency Activity Working Group, Vancouver, B.C., January 1991.

CEPA AND THE FEDERAL HOUSE IN ORDER:
Reforming the Federal Government's Environmental Performance

Issues for the Five Year Review of the Canadian Environmental Protection Act

by

Kenneth Fisher, LL.B.
Research Assistant
for the
CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY
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CEPA AND THE FEDERAL HOUSE IN ORDER:
Reforming the Federal Government's Environmental Performance

I. INTRODUCTION

The following brief examines the House in Order provisions in the *Canadian Environmental Protection Act* (CEPA) and provides some analysis of the issues and problems with the provisions in their current form. In addition to examining the relevant sections of CEPA, we have made reference to the following material:

1. Reviewing CEPA: An Overview of the Issues ("Reviewing CEPA")

2. Evaluation of the Canadian Environmental Protection Act - Final Report (The "RFI Report")

3. CEPA Review Workshop (Nov. 23-24, 1994) - Federal House in Order Discussion Paper - CEPA Review Issue Analysis (The "Discussion Paper")

The first source is an examination of the CEPA House in Order provisions by Environment Canada. The second source is a report submitted to Environment Canada by Resource Futures International (RFI). The third source is a discussion paper sponsored by Environment Canada which contains suggested changes to some of the House in Order provisions. These three sources are useful in understanding some of the issues and problems in the House in Order provisions of CEPA (Part IV - sections 52-60).

II. THE CANADIAN ENVIRONMENTAL PROTECTION ACT

CEPA was proclaimed in 1988 and is a cornerstone of federal environmental legislation. CEPA was enacted to improve legislation protecting the environment. The federal government passed CEPA in response to an array of environmental problems, particularly the control of toxic substances.[1]

III. CEPA'S FEDERAL HOUSE IN ORDER PROVISIONS

1. Introduction

It is well known that the activities of the federal government have a significant impact on the environment. In the Green Plan, the government stated that:

> "Federal operations must be exemplary in meeting and frequently exceeding all regulations and standards ... "[2]

Federal works and activities are subject to all federal legislation, including CEPA. However, such works and activities are *not* subject to provincial legislation. Part IV of CEPA is intended to fill this gap by ensuring that federal activities (as defined in sec. 52) which are subject to provincial legislation only, and would otherwise be exempt since there is no comparable federal legislation, will meet adequate environmental standards. Examples of items regulated by provincial legislation only, and thus not covered by federal legislation) include discharge and storage of wastes.[3]

2. CEPA Section 54

The House in Order provisions of CEPA (Part IV) are contained in sections 52-60. Part IV "gives the Minister of the Environment ["the Minister"] the authority to regulate waste handling and disposal practices, as well as emissions and effluent of federal departments and agencies and Crown corporations. In addition, Part IV gives the Minister the authority to make regulations and guidelines that apply to federal lands, works and undertakings when no other act of Parliament applies."[4] This authority is vested in the Minister under sections 53 and 54.

Under s. 54, the ability of the Minister to enact regulations governing the activities of federal departments is severely restricted. Section 54 states that regulations can only be enacted if there is no other federal legislation which provides for regulations to protect the environment which apply to federal works, undertakings or lands. This provision thus has the curious effect of preventing any improvements to federal legislation dealing with the environment through CEPA, since the House in Order provisions are valid only in cases where no federal legislation exists.

If there is no legislation concerning the environmental impact of federal activities, s. 54 will apply. However, the section continues by stating that the Minister may *recommend* to cabinet that regulations be enacted *only after the Minister has obtained the concurrence of the department whose activities are the subject of the proposed regulations* before such regulations can be enacted. It is highly unlikely that a Minister of a particular department would grant permission to the Minister to enact regulations against that department. The result is that

the Minister cannot recommend regulations to cabinet without the permission of the department which stands to be regulated. Such a restriction has proven to be a severe impediment to effective regulation of federal activities on the environment. To date, Part IV regulations are in place only for the treatment and destruction of PCB wastes.[5]

3. Obtaining Compliance - Regulatory or Voluntary Approach?

One of the disturbing aspects of the RFI Report is its finding that

> "Since the proclamation of CEPA, there has been a marked shift in emphasis in the implementation of Part IV away from regulation towards voluntary approaches ..." [6]

As part of the Green Plan, the government has undertaken several non-regulatory initiatives designed to improve its environmental record. The RFI Report notes that these initiatives need to be evaluated together with Part IV of CEPA since they are "mutually reinforcing and are sometimes used as alternatives to each other".[7] These supporting initiatives beyond Part IV of CEPA include:

- Code of Environmental Stewardship (Federal Government)
- Office of Environmental Stewardship (Federal Government)
- Environmental Accountability Partnership (Environment Canada)[8]

The RFI report discusses these initiatives in some detail, noting that the Code of Environmental Stewardship "merely sets the *principles* by which the government is to manage its internal operations." [emphasis added] [9] There are no formal sanctions in place in the event that a department does not meet the requirements of the Code.

Clearly, Part IV or any other initiative cannot be effective if no mechanism is in place to ensure compliance. Lack of compliance is perhaps the most serious defect with Part IV in its current form, particularly s. 54. Environment Canada recognizes the difficulty of monitoring government activities through voluntary compliance, although it is somewhat enthusiastic about the progress made to date:

> "As indicated in the Stewardship annual report, departments are making progress in responsible environmental stewardship, although it may not be as fast or as comprehensive as might be wished."[10]

IV. REVIEWING THE RECORD - AN ENVIRONMENTAL FAILURE

The RFI Report states that the federal government has failed in its declared goal of demonstrating leadership in the field of environmental protection. The government has failed to make implementation of Part IV of CEPA a high priority, and has relied mostly on a voluntary approach to compliance.[11] The RFI Report then quotes Diane Saxe, a prominent environmental lawyer, in a sharply-worded attack on the lack of action by the government to adequately address the impact of its operations on the environment:

> "Although these gaps have been frequently brought to the attention of federal officials, little has been done. Part IV of the Canadian Environmental Protection Act ... purports to authorize the necessary regulations, ... Not only has the federal government failed to bring in adequate measures of its own, it has also refused to comply with provincial measures. ..."[12]

The RFI Report concludes with the following comment regarding government's environmental housekeeping efforts:

> "The low priority assigned to controlling the environmental effects of federal government activities represents a significant failure of political will and has important consequences for environmental protection in Canada. ... the current combination of low resources, inadequate legal drafting, minimum political will and almost no regulations is ineffective and must be changed."[13]

The government has not disputed the points stated in the RFI report, and admits that "To date, very little has been accomplished in implementing Part IV of CEPA."[14] Clearly, Part IV has been ineffective and must be amended if the government is to adequately control the effects of its activities on the environment.

V. ENVIRONMENT CANADA'S PROPOSED AMENDMENTS TO PART IV

1. The Three-Pronged Approach

Environment Canada's Federal House in Order Discussion Paper regarding CEPA recommends a three pronged approach which would eliminate sections 53 and 54 of CEPA and replace them with sections which would strengthen the role of the Minister of Environment. The Discussion Paper, which was written by Environment Canada, provides the following description of the proposed amendments which would give the Minister the following powers:

1. Ability to make regulations pertaining to federal real property and operations related to any environmental issue with *the concurrence of the Ministers of the departments*

to which it applies. [emphasis added]

2. Ability to selectively adopt provincial regulations, by reference, thereby making them federal regulations for federal facilities in that province.

3. Ability to issue codes and best practices guides to give discretionary direction to departments and assist them with their responsibilities related to environmental stewardship, pollution prevention and environmental emergencies.[15]

The Discussion Paper does not provide the actual wording which the new sections would have, but goes into some detail about problems under the current wording of Part IV and how the three-pronged approach would enable the government to do a better job of regulating the impact of its activities on the environment.

This proposal does not appear to adequately address the problems with the House in Order provisions in their current form. In point #1 of the three-pronged approach, the ability of the Minister to make regulations regarding federal activities remains contingent on the concurrence of the departments engaged in these activities. As discussed earlier, this is a severe restriction on the power of the Minister to enact regulations under Part IV of CEPA.

Point #3 refers to "codes" and "best practice guides" - the problem of lack of enforcement under a voluntary system has not been addressed. Environment Canada admits that the federal departments "would prefer more emphasis on the more voluntary Stewardship approach rather than either provincial or federal legislation."[16] Finally, the suggestion in point #2 that provincial regulations be adopted by reference into federal legislation may be problematic from a legal standpoint - this suggestion would have to be carefully scrutinized to verify that it is legally valid.

The Discussion Paper summarizes several possible approaches to improving Part IV, and provides the "pros" and "cons" of each approach.[17] A review of the Discussion Paper indicates that Environment Canada appears to favour the three-pronged approach.

VI. CONCLUSIONS AND RECOMMENDATIONS

The activities of the Federal government have a profound impact on the environment. The legislative provisions which are meant to deal with this issue are sections 52-60 of CEPA (Part IV). It is clear from the RFI Report, which is very critical of the performance of the federal government as well as from publications put out by Environment Canada that the House in Order provisions in CEPA have been ineffective and that the government has failed to fulfil its mandate of adequately protecting the environment from its activities.

The government has undertaken other initiatives in addition to Part IV to protect the

environment, and these programs should be examined in the evaluation of the impact of federal government activities on the environment. One of the major flaws with Part IV of CEPA is its *voluntary* nature - federal departments must give their consent before regulations which will affect them can be enacted under CEPA. As a result, the Minister of Environment has made very few regulations under Part IV.

The sources examined in this brief are useful in analyzing the problems with and possible amendments to Part IV. The RFI Report is sharply critical of how the government has dealt with the House in Order issue, and the Reviewing CEPA: A Overview, written by Environment Canada, admits to serious difficulties with Part IV. The Discussion Paper of Environment Canada reviews the problems with Part IV in its present form and details a three-pronged approach which it feels is the most practical and effective to improving the House in Order provisions of CEPA. Our proposals are more far-reaching than the three-pronged approach and gives the Minster of the Environment much greater power to regulate the impact of federal department activities on the environment.

Clearly there are severe problems with Part IV of CEPA - there is a pressing need to amend these sections of CEPA and to ensure that compliance with CEPA by federal departments is *mandatory*. It is hoped that the government's re-evaluation of CEPA in the months to come will result in substantial and meaningful amendments to the Act. In this context we make the following proposals.

Recommendations

1) *CEPA should be amended to permit, on the recommendation of the Minister of the Environment, the Governor in Council to make regulations for the purpose of the protection of the environment with respect to federal works, undertakings or lands. Such regulations would take precedence over any other regulations resulting in environmental protection applying to federal works, undertakings or lands made under any other Act of Parliament.*

2) *CEPA should be amended to permit, on recommendation of the federal Minister of the Environment, the Governor in Council to make regulations for the protection of the environment with respect to the activities and operations of federal departments, boards, agencies and, where appropriate, corporations named in Schedule III of the Financial Administration Act.*

3) *The Minister of the Environment should be permitted to make "Environmental Protection Orders" for the purpose of protection of the environment with respect to federal works, undertakings or lands, and with respect to the activities and operations of federal departments, boards, agencies and Financial Administration Act Schedule III corporations in the absence of regulations made for this purpose by the Governor in Council. Such orders should be legally binding instruments.*

4) *CEPA should be amended to require that each federal department, board, agency and Financial Administration Act Schedule III Crown corporation develop an environmental management plan. Initial plans should be required to be in place within one year of the coming into force of the amendments to CEPA. CEPA should also require that, once in place, Environmental Management Plans be reviewed publicly every four years.*

Each Environmental Management Plan would outline:

* *The key environmental issues facing the department, board, agency or corporation in its operations and activities; and*

* *an implementation plan to ensure that in its operations and activities the department, board, agency or corporation:*
  - *practices and promotes pollution prevention through the reduction and elimination of the use, generation or release of pollutants into the environment;*
  - *practices and promotes natural resource conservation through energy efficiency, water efficiency and waste reduction, reuse, recycling and composting;*
  - *protects and enhances biodiversity;*
  - *promotes the conservation, protection and enhancement of ecosystem integrity; and*
  - *protects environmentally sensitive areas;*

The adequacy of Environmental Management Plans and compliance with requirements could be regularly reviewed and reported upon by the proposed federal Environmental Commissioner.[18]

Under CIELAP's proposals, the status of CEPA as the paramount federal environmental protection statute would be affirmed and strengthened. The Minister of the Environment would be granted the power to enact regulations to ensure that the environment is protected in the conduct of activities under federal jurisdiction, and each federal agency would be required to incorporate environmental considerations into its internal management and operational practices. These would be important steps in ensuring that the federal government leads by example through the sound environmental management of its own affairs.

ENDNOTES

1. Environment Canada, Reviewing CEPA: An Overview of the Issues (Ottawa: Environment Canada, 1994), p.1

2. Resource Futures International, Evaluation of the Canadian Environmental Protection Act - Final Report (Ottawa: Environment Canada December 1993), p.107

3. Ibid., p.107

4. Ibid., p.107

5. Ibid., p.108

6. Ibid., p.110

7. Ibid.

8. These initiatives are discussed in the RFI Evaluating CEPA report at pages 108-109, and in Environment Canada, Reviewing CEPA: An Overview at page 12.

9. RFI, Evaluation of the Canadian Environmental Protection Act, p.110.

10. Environment Canada, Reviewing CEPA: An Overview of the Issues, p.12

11. RFI, Evaluation of the Canadian Environmental Protection Act, p.111

12. Ibid., p.112

13. Ibid., p.113

14. Environment Canada, Reviewing CEPA: An Overview of the Issues, p. 13.

15. Environment Canada, Environment Protection Service, CEPA Review Workshop, Federal House in Order Discussion Paper - CEPA Review Issue Analysis, (Ottawa: Environment Canada, October 1993) p.1

16. Ibid., p.3

17. Ibid., pp.7-9

18. Standing Committee on Environment and Sustainable Development The Commissioner of the Environment and Sustainable Development (Ottawa: House of Commons, May 1994).

CANADIAN ENVIRONMENTAL PROTECTION ACT REVIEW:

TRANSBOUNDARY WASTE MOVEMENT PROVISIONS

By:

John Jackson
Ontario Toxic Waste Research Coalition

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CANADIAN ENVIRONMENTAL PROTECTION ACT REVIEW: TRANSBOUNDARY WASTE MOVEMENT PROVISIONS

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CANADIAN ENVIRONMENTAL PROTECTION ACT REVIEW: TRANSBOUNDARY WASTE MOVEMENT PROVISIONS

Executive Summary

Canada has taken action to control the export and import of hazardous wastes through regulations under the Canadian Environmental Protection Act (CEPA). However, these regulations are inadequate. They fail to minimize the production of wastes, to adequately protect the environment, to provide for social equity, and to fulfil Canada's international obligations.

CEPA and its regulations should be changed to achieve these goals by:

* banning the import of prohibited substances,

* giving the Federal Government the power to ban the import or export of hazardous wastes,

* banning the export of hazardous waste for disposal and recycling to non-OECD countries,

* requiring exporters and importers of hazardous wastes to develop plans for phasing out exports and imports, and

* removing the special, more lax, provisions for hazardous wastes destined for recycling facilities.

CEPA does not currently address municipal, non-hazardous solid wastes. CEPA should be amended to give the Federal Government power and responsibility to control the import and export of municipal solid wastes. Regulations should be developed under CEPA to phase out the import and export of municipal solid wastes.

PART I: HAZARDOUS WASTES

A: THE INTERNATIONAL CONTEXT

During the late 1980's, the United Nations developed the Basel Convention on the export of hazardous wastes. Canada signed this Convention in 1989. Canada has implemented the Basel Convention through regulations under CEPA. As of March 1994, 55 countries had signed the Basel Convention.

Provisions that have been developed under the Basel Convention and agreed to by Canada, although sometimes reluctantly, include:

* "Prohibit immediately [May 1994] all transboundary movements of hazardous wastes which are destined for final disposal from OECD to non-OECD States;"[1]

* "Phase out by 31 December 1997, and prohibit as of that date, all transboundary movements of hazardous wastes which are destined for recycling or recovery operations from OECD to non-OECD States;"[2]

* Notify importing country of the proposal to move wastes into or through it and to not allow the waste movement until or unless it has received written confirmation from the importing country.[3]

The Basel Convention presented several reasons for discouraging or banning the international movement of hazardous wastes:

* "the growing threat to human health and the environment posed by the increased generation and complexity, and transboundary movement of hazardous wastes and other wastes;"

* "the most effective way of protecting human health and the environment from the dangers posed by such wastes is the reduction of their generation to a minimum in terms of quantity and/or hazard potential;"

* "the need to continue the development and implementation of environmentally sound low-waste technologies, recycling options, good house-keeping and management systems with a view to reducing to a minimum the generation of hazardous wastes and other wastes;"

* "the increasing desire for the prohibition of transboundary movements of hazardous wastes and their disposal in other states, especially developing countries;"and

* "hazardous wastes and other wastes should, as far as is compatible with environmentally sound and efficient management, be disposed of in the State where they are generated."[4]

Wastes earmarked for recovery facilities[5] are placed under the same provisions as wastes destined for disposal because:

* "a significant amount of hazardous wastes destined for recovery operations may actually end up in final disposal operations. This could be a valid outcome of the recovery process, but it could indicate a sham transaction."

* "residues arising from the recovery of hazardous wastes can be hazardous themselves, perhaps even more hazardous than the original wastes."[6]

Several international agreements, to which Canada is not a party, have been signed which ban the transboundary movement of hazardous wastes. These agreements focus on banning the movement of hazardous wastes from "developed" to "developing countries" or from OECD to non-OECD countries. These agreements include:

* The Lome IV Convention: signed by 68 African, Caribbean and Pacific states, and 12 member states of the European Union. It bans all imports of radioactive and hazardous wastes to African, Caribbean and Pacific countries from any country; the 12 European Union countries agreed not to export any hazardous wastes to ACP countries. [December 1989]

* The Bamako Convention: Bans all hazardous waste imports into Africa. [January 1991]

* The Central American Agreement on Hazardous Waste: Bans the import of hazardous wastes into Central America. [April 1993]

* The UN Economic Commission for Latin America and the Caribbean passed a convention prohibiting the importation of hazardous wastes. [November 1993]

* Barcelona Convention: Nineteen Mediterranean countries agreed to prohibit the export and transit of hazardous wastes to non-OECD countries. [October 1993]

* Countries in the South Pacific and South East Asia are currently developing similar conventions.

Canada also has international responsibilities under agreements made as a member of the Organization for Economic Cooperation and Development.[7] In March 1992, the OECD established a three-tier system (Green, Amber, Red) to ensure that shipments of

hazardous wastes destined for recycling receive the proper degree of control, based on the overall risk of the waste. Canada implemented this agreement through a regulation under CEPA.

In October 1986, Canada signed the "Canada-U.S.A. Agreement on the Transboundary Movement of Hazardous Waste." This Agreement sets out specific conditions for the export and import of hazardous wastes between the two countries including prior notification provisions. This Agreement was also implemented under CEPA regulations.

B: THE EXTENT OF THE HAZARDOUS WASTE TRADE

It is very difficult to get accurate current data on the extent of the hazardous waste trade. It necessitates going through voluminous records. Also any estimates made only take into account legal transactions. It is well known that there is a substantial illegal international trade in hazardous wastes. Environment Canada's data show 229,648 tonnes of hazardous wastes exported from Canada in 1993 and 173,416 tonnes imported to Canada in 1993.[8]

EXPORTS

Between 1990 and 1993, over 160,000 tonnes of hazardous wastes were shipped from Canada to non-OECD countries in Asia. Almost two-thirds of these wastes were sent to India.[9] The following countries also received over 7,000 tonnes of wastes from Canada during that period: Hong Kong, Taiwan, China, and South Korea. The largest categories of wastes shipped from Canada to these countries were ferrous metals, plastic wastes, copper waste, aluminum, nonferrous metals, zinc, lead, incinerator ash, and cadmium. These data do not include wastes that went to the U.S. before being shipped to Asia.

The greatest amount of hazardous waste movement is between Canada and the United States. In 1991, Canada exported 223,000 tonnes of hazardous wastes to the U.S. Approximately 50% of these wastes were destined for recycling or recovery facilities.[10]

IMPORTS

Canada imports very little hazardous wastes from outside of the U.S. In 1991, Canada imported 135,000 tonnes of hazardous wastes from the U.S.[11]

Two major sites in Canada import massive quantities of hazardous wastes from the United States. The Stablex hazardous waste stabilization plant and landfill in Blainville, Quebec, near Montreal is the largest foreign dumpsite for U.S. waste.[12] It is currently importing 60-70 thousand tonnes of hazardous wastes from the U.S. each year. In 1988, 72% of the wastes at this facility came from the U.S.[13] Stablex has recently applied to the Quebec Environment Ministry for a permit to treat an additional 60,000 tonnes of wastes per year. A substantial part of this would come from the U.S.[14]

The Stablex facility has been the centre of controversy recently. The U.S. EPA fined it for illegal waste imports, and local citizens have been campaigning to halt the import of wastes to the site. In 1990, a provincial commission of inquiry expressed serious environmental concerns about the Stablex operation.[15] In February 1992, the Stablex site produced a hazardous nitric acid cloud that floated through the community.[16]

The other major importer of hazardous wastes from the U.S. is Laidlaw. Most of their hazardous waste imports are brought to their commercial landfill and incinerator near Sarnia, Ontario. In 1993, they imported 12,144 tonnes of hazardous wastes for incineration and 13,807 tonnes for landfill.[17] In 1993, Laidlaw exported 9,759 tonnes of hazardous wastes to the U.S. Over half of this was sent to be used as fuel, primarily in cement kilns. Approximately 37% was sent for unspecified "treatment." Less than 10% of the wastes exported were sent to incineration and landfill.[18]

Laidlaw's hazardous waste incinerator and landfill near Sarnia has been the on-going focus of citizens' calls to stop its ever-expanding activities and to plan for the closing down of the facility. Local residents complain of crop damage from spills, "odours so bad residents have to evacuate their properties, and a continued degradation of lifestyle for both parents and children alike."[19] In 1990, emissions from the incinerator stack exceeded provincial regulations over sixty times.

Alberta's hazardous waste facility at Swan Hills recently expanded its capacity. It currently does not receive any wastes from outside of the province. But company heads calculate that Alberta only has enough wastes for the plant to operate at 50% of capacity.[20] Therefore, the Alberta Special Waste Management Corporation is currently applying to have its permit opened so it can receive wastes from outside of Alberta.

Proposals to import hazardous wastes from the U.S. frequently arise. For example, Newfoundland has recently been plagued by such proposals. A proposal at Schefferville would have brought in incinerator ash and aluminum industry wastes from the U.S. Another proposal would have backfilled mines at Baie Verte with asbestos-contaminated and other hazardous wastes from the U.S.[21]

C: CEPA PROVISIONS

LEGISLATIVE PROVISIONS

Sections 41, 43, 44 and 45 of CEPA address the "Export and Import of Toxic Substances and Waste Materials." These sections have the following provisions affecting the import and export of hazardous wastes:

* Prohibited substances listed in Part I of Schedule II may only be exported for destruction purposes. [Sec. 41 (2)]

* The Governor in Council has the power to make a "List of Hazardous Wastes Requiring Export or Import Notification." [Sec. 43 (1)]

* The Minister is to compile a list of "Hazardous Waste Authorities" specifying the authorities, bodies and persons to whom notice is to be given for the import or export of a hazardous waste. [Sec. 43 (2)]

* An exporter or importer of hazardous wastes is required to give notice in accordance with regulations passed under CEPA. [Sec. 43 (3)] In 1993, 3200 notices were received from Canadian exporters and importers under this requirement.[22]

* An exporter or importer of hazardous wastes must comply with the conditions prescribed by the approving agency for that transaction. [Sec. 44]

* The Minister of the Environment is required to publish notices for the export or import of hazardous wastes in the Canada Gazette. [Sec. 45 (2)]

* The Governor in Council may make regulations to carry out the purposes of the previous sections.

REGULATORY PROVISIONS

Export and Import of Hazardous Wastes Regulations

This regulation came into effect on November 26, 1992 to fulfil several of Canada's international obligations: to allow it to ratify the Basel Convention, to implement the OECD's Decision on Recyclables, and to continue to administer the Canada-U.S. Bilateral Agreement.

The provisions of these regulations include:

* the prohibition of the export of hazardous wastes to countries that ban such imports;

* requirements for advance notice of hazardous waste shipments for disposal purposes, and the consent of the authorities of the importing and transit countries, for countries that are signatories to the Basel Convention or have a special agreement with Canada; [Part II]

* special provisions regarding the export and import of hazardous wastes for recycling for countries that are signatories to the Basel Convention or have a special agreement with Canada; [Part III]

* a tracking system for hazardous wastes to ensure that the Federal Government knows where the wastes are going and to confirm they have reached their intended destination;

* requirement that every importer or exporter of hazardous wastes obtain insurance to cover environmental damage and for clean-up should an accident occur;

* contingency arrangements if shipments cannot be completed as planned; and

* the prevention of illegal traffic in hazardous wastes.

The Government also included in this regulatory package a list of hazardous wastes requiring export or import notification and a list specifying which countries must receive prior notice.

The regulation distinguishes between wastes destined for disposal and wastes destined for recycling operations.[23] The reasoning behind making more lenient provisions for wastes destined for recycling operations are:

* "recycling of wastes, especially hazardous materials, is generally more environmentally sound than disposal;"[24] and

* "there is tremendous economic advantage in ensuring an efficient and viable secondary market for 'waste' products that might otherwise be disposed of."[25] [underlining in original]

The regulation lists 78 types of hazardous wastes which are not subject to the full provisions in the regulation for the export and import of hazardous wastes. This is what

the OECD refers to as the "green list" [Schedule III, Part III]. The major differences in the provisions are:

* Consent Requirements: For wastes destined for disposal, the country the wastes are being shipped to must consent in advance in writing [Sec. 6 (k)]. For wastes on the "green list" destined for recycling facilities, written consent is not required. Instead, there is a thirty-day waiting period from the time that notice is sent to the Canadian Government [Sec. 16. (1) (c)]. The thirty-day waiting period is reduced to seven days when the facility is on the OECD's list of recycling facilities authorized to receive pre-approved shipments of hazardous waste [Sec. 16. (3)].

* Liability Insurance: For wastes destined for disposal, insurance of at least $5 million must be carried for each export or import [Sec. 9. (2)]. For "green list" wastes destined for recycling facilities, the minimum insurance is $1 million [Sec. 16. (2) & Sec. 17 (2)].

This regulation was amended in July 1994 to harmonize these regulations with the Transportation of Dangerous Goods Regulations, to allow the use of an electronic data interchange system, and to allow the Department of National Defence to import its own hazardous wastes generated outside of Canada during military activities without having to get the approval of the Minister of the Environment.

PCB Waste Export Regulations:

In August 1990, the Government passed a regulation under CEPA banning the export of PCB wastes, except to the United States, and except where a product in good working order contains a capacitor with less than 500 grams of PCBs in the product. This regulation was passed after the negative publicity that surrounded the shipment of PCBs from St-Basile-le-Grand to England. Protests in England led to the PCBs being shipped back to Canada.

D: ASSESSMENT OF CEPA'S PROVISIONS

CRITERIA FOR JUDGING ADEQUACY OF CEPA'S PROVISIONS

We will use four criteria to assess the adequacy of CEPA in addressing the transboundary movement of hazardous wastes:

(1) Minimization of the Production of Wastes:

All those working on hazardous waste issues have long recognized that waste minimization must be our primary goal. For example, in 1990, Steve Hart, then head of Environment Canada's Waste Division, said that the first mandate of the Hazardous Waste Management division of Environment Canada is "to ensure that generation at source is reduced to a minimum."[26] When Canada signed the Basel Convention, it assumed the obligation to "ensure that the generation of hazardous wastes and other wastes within it is reduced to a minimum, taking into account social, technological and economic aspects."[27]

(2) Protection of the Environment:

The declaration at the beginning of CEPA states that "the protection of the environment is essential to the well-being of Canada." Therefore, in judging the success of the Act it is essential that this be used as one of the criteria.

(3) Social Equity:

The grassroots movement across the continent is insisting that issues of social equity be placed in the forefront when making waste management decisions.[28] Reg Lang, a professor in the Faculty of Environmental Studies at York University in Toronto, has written that "waste management methods which involve the imposition of unwanted risks and impacts upon the few for the benefit of the many raise important moral and ethical issues."[29] In recognition of the legitimacy of social equity and justice issues, President Clinton signed the environmental justice declaration in August 1993.

(4) Fulfilment of International Obligations:

The preamble to CEPA states that one of the legislation's intentions is "to fulfil its international obligations in respect of the environment." These obligations were briefly described in the first part of this report.

SUCCESS OF CEPA

(1) Minimization of the Production of Wastes:

To achieve this goal it is essential that both governments and producers of hazardous waste overwhelmingly focus their efforts on changing production processes, in particular on replacing the hazardous materials with less hazardous or non-hazardous wastes, to avoid producing hazardous wastes. The continued creation of new disposal facilities and expansion of existing hazardous waste disposal facilities both here and in other countries works contrary to that goal. This action by government tells industry that it is okay to produce hazardous wastes, as opposed to sending the message that available disposal capacity will be minimal and industry better stop producing hazardous wastes.

In addition, continued acceptance and expansion of disposal facilities diverts government attention away from seeking to implement the preferred solutions. Joel Hirschhorn, the former head of the U.S. Congress' Office of Technology Assessment describes this problem:

> Attention paid to siting diverts attention and resources from alternative methods of dealing with the hazardous waste problem. The "costs" of preoccupation with siting are particularly high if alternative approaches confront the problem more directly and offer solutions that are potentially more productive and less expensive.[30]

CEPA and the import-export regulations passed under it, with the exception of the PCB regulation, set up a regime to facilitate continued export and import of hazardous wastes. The regulations do not state that this is an interim measure, to be used while production processes are being changed, and that the end goal should be to avoid the continued production of hazardous waste.

In addition, by supporting the export and import of hazardous wastes, CEPA allows producers of wastes to avoid living with the environmental consequences of disposing of those wastes. An important incentive to minimize the production of wastes is taken away when waste producers and governments are not forced to live with the consequences of waste disposal and do not have to go through the political consequences caused by the unpopularity of waste disposal facilities.

As has been shown in Section C, the regulations under CEPA distinguish between wastes destined for disposal and those destined for recycling facilities. Recycling is only fourth on the waste management hierarchy, after elimination, reduction, and re-use. Recycling is not a preferred method because it still involves the creation of hazardous wastes and, although it may slow down the throwing-away of those wastes, they will eventually be disposed of even if recycled. Therefore, any serious waste minimization strategy should not give preference to recycling.

As has been shown, CEPA fails to support the goal of minimizing the production of hazardous wastes.

(2) Protection of the Environment:

By setting up a regime to facilitate the import and export of hazardous wastes for disposal, CEPA encourages the operation of waste disposal facilities that pollute the environment.

Exporting wastes to facilities in areas such as South East Asia or Mexico, where environmental standards are not as strict as in Canada, results in increased contamination of those communities. It is irresponsible of us to not assume responsibility for the contamination problems we create elsewhere. Scientists are increasingly pointing out the significance of the deposition of air borne contaminants from distant places as a source of contamination in Canada.[31] These contaminants also return to us in contaminated food imports.

Hazardous waste imports add to the problems already being created at these disposal facilities in Canada. Section B of this report described environmental infractions and difficulties at the two major disposal facilities in Canada receiving wastes from outside of Canada.

All hazardous waste disposal facilities contribute to environmental contamination. It is for this reason that the International Joint Commission recommended "the phase out of incineration facilities, or a requirement to eliminate the production and emission of a variety of persistent toxic substances, and establishment of uniform requirements for incinerators in the Great Lakes region based on the principle of zero discharge."[32] It is impossible to operate a zero discharge hazardous waste incinerator; therefore, the implications of this recommendation is the banning of all hazardous waste incinerators. Likewise, even the best hazardous waste landfill eventually leaks. The U.S. Congress' Office of Technology Assessment has stated that every hazardous waste landfill is known to be leaking. The question is not whether they will leak, but when they will leak.[33]

The import of hazardous waste means that existing disposal facilities in Canada fill up more quickly, and proposals for expansions or new facilities come forward. Stablex has asked for expansion in the quantities of wastes it may receive, based heavily upon an import market. Likewise the Laidlaw facility near Sarnia currently has an application to expand its hazardous waste landfill. Laidlaw makes its decisions for facility expansion on the basis of the continental market -- not the Canadian market.

The environmental argument given for supporting the movement of hazardous wastes across political borders is that it is better to have the wastes move than to be inadequately disposed of where they are produced. In terms of exports from Canada to

non-OECD countries, this argument cannot apply since our facilities would be more capable of handling the wastes.

The alternative to exporting to the non-OECD world is not to dispose of them here unsafely because of a lack of capacity in North America. Laidlaw recently determined that "the continent's rotary kilns are operating at only 70 per cent of available capacity."[34] Likewise the Swan Hills facility in Alberta is operating far below capacity.

In terms of imports, most of the hazardous wastes imported into Canada come from the U.S. The facilities there operate under standards that are just as strict as Canada's.

Likewise exporting and importing hazardous wastes for recycling purposes does not contribute to protecting the environment. There are many polluting hazardous wastes recycling facilities in all parts of the world, including Canada. Also recycling facilities themselves create hazardous wastes, which are often more hazardous than the original wastes that were brought to the plant. Therefore, there is no justification from an environmental perspective for distinguishing between hazardous wastes sent for disposal and recycling.[35] CEPA does, however, make such a distinction.

(3) Social Equity:

A fundamental principle for applying social equity to hazardous waste issues is that wastes should be handled as close to where they are produced as possible. There are several reasons for this:

* Those that gain the benefit from production, e.g., increased employment, are the ones who have to live with the risks caused by disposal of wastes from that production.

* It forces more people to live with the consequences of our wasteful society and to, therefore, be responsible.[36]

* It means that a few communities do not become the dumping ground for everybody else.

* One community or a few communities should not have to live with ever expanding disposal facilities in their communities.

Importing hazardous wastes from great distances is clearly contrary to these criteria. But CEPA encourages the import of wastes.

Likewise exporting hazardous wastes is contrary to the social equity principle. This becomes even more serious when the exports are made to countries where the populace have even less ability to determine corporate and government decisions than we do.

In short, CEPA does not foster social equity.

(4) Fulfilment of International Obligations:

With the following two exceptions, Canada has used CEPA to carry out its obligations under international agreements. The exceptions are:

* CEPA regulations currently support waste exports to all countries that have signed the Basel Convention. Many of these countries are non-OECD countries. These regulations thus are contrary to the decision in May 1994 at the Second Meeting on the Basel Convention which said that immediately all hazardous waste exports to non-OECD countries should be banned.

* CEPA regulations support waste exports for recycling reasons. Indeed, through the "green list" it encourages waste exports for recycling. These regulations are contrary to the May 1994 Basel Convention decision to phase out exports for recycling to non-OECD countries by December 1997.

Canada has resisted attempts to include wastes destined for recycling under the provisions for bans to non-OECD countries. For example, at the meeting under the Basel Convention in March 1994, Canada tried to delay a decision on this matter since it was clear that the overwhelming majority of countries wanted a total ban on waste exports for recycling. Canada's official position on the topic was that "it is premature to discuss a ban on exports of hazardous wastes destined for recovery operations."[37] Because of overwhelming pressure, Canada was forced to give in on the issue.

PART II: THE IMPORT AND EXPORT OF MUNICIPAL SOLID WASTES

Currently, CEPA is not used to control the import and export of non-hazardous municipal solid wastes.

A: EXPORT

Until recently, municipal waste was exported from Canada only for incineration. The US Department of Agriculture banned the import of solid waste for landfill because of fears that plant diseases would be brought in with organic materials. This ban was dropped in 1991.

The removal of this ban combined with sharply rising tipping fees in some parts of Canada -- especially Ontario -- resulted in rapid increases in the export of municipal solid waste to the U.S. For example, institutional, commercial and industrial wastes dumped at Metro Toronto's main landfill site decreased dramatically from 1.6 million tonnes in 1990 to 108,000 tonnes in 1992.[38] The Ontario Government estimates that over 1 million tonnes of solid non-hazardous waste were exported from Ontario to U.S. disposal facilities in 1992.[39]

Proposals to increase the export of municipal waste are now being presented in Ontario. Waste Management of Canada Inc. has put a bid in to put Toronto's waste on 55 to 120 rail cars each day and take it for disposal in a landfill in Ohio.[40]

On the surface it may appear that the export of municipal waste benefits Canada by diminishing the need for more disposal capacity in Canada. But this is only a limited perspective on the implications of waste export. The main concerns with exporting are:

* It means that Canadians avoid some of the negative consequences of being the second largest creator of municipal waste in the world, thus diminishing efforts to reduce waste production.

* It ignores the fact that the export situation could quickly change to an import situation if tipping fees drop in Canada, which currently is happening in Ontario[41], and tipping fees rise in the U.S., which is happening because of new stricter requirements on landfills in the U.S. Report on Business Magazine estimates that as a result of these new U.S. regulations tipping fees in the U.S. may go up to $200(U.S.) a tonne.[42]

* Many recyclables are going to disposal in the U.S., which is undermining the development of the recycling industry in Canada because recycling companies need these recyclable materials.[43]

*. It ignores the fact that others do not want our garbage. Newspaper headlines such as "Ontario trash a burning issue in New York"[44] and "Canada, 35 states dump on Michigan"[45] attest to the negative image this brings for Canada and the irresponsibility involved in dumping our wastes on others.

B: IMPORT

There are no data on the amounts of municipal garbage imported into Canada for disposal.

The import of municipal waste has been a very hot issue in some parts of Canada. For example, in Quebec, public mobilization resulted in regulations being amended to ban the import of solid wastes for burial in Quebec. This arose as a result of citizen action in Estrie.[46] A citizens' group in Newfoundland is fighting a proposal to incinerate 3,500 tonnes each day of municipal garbage from New York in Long Harbour.[47]

C: CEPA AND MUNICIPAL SOLID WASTE (MSW)

Currently, CEPA does not apply to municipal solid waste.

In 1992, the Federal Government took steps that were supposed to begin changing this situation. On November 25, 1992, Canada and the U.S. amended the Canada-USA Agreement on the Transboundary Movement of Hazardous Waste to include municipal solid waste being sent for final disposal, or for incineration with energy recovery. The two Governments were to set up an "interim voluntary system for notification regarding the transboundary movement of non-hazardous municipal solid waste."[48] The intent of this interim step was to better characterize the movements of municipal waste across the border. Two years have passed and still no voluntary system has been set up.[49]

When it amended the Canada-USA Agreement, the Federal Government said it would develop a regulatory system for municipal solid waste under CEPA. In 1992, Steve Hart, then Director of the Office of Waste Management for Environment Canada, wrote: "As the federal government currently does not have statutory authority over the export and import of non-hazardous MSW, it is anticipated that such authority would be sought under amendments to the Canadian Environmental Protection Act."[50] Environment Canada promised to move towards these amendments after consultation with all interested stakeholders.[51] To date, no such consultations have been held with the environmental community.

Ontario has requested Federal action to control the movement of municipal waste across the Canada-U.S. border. Ontario's Minister of the Environment and Energy, Bud Wildman, has asked the Federal Government to "impose an export tax on all international shipments of this waste [solid, non-hazardous waste] as an interim measure until the Canadian Environmental Protection Act can be amended to give the federal

government legislative authority to regulate transboundary shipments in the longer term."[52]

It is now time for the Federal Government to follow up on its commitment to put municipal solid waste into CEPA and to consult on the details of regulations on municipal solid waste under CEPA.

PART III: RECOMMENDATIONS

RECOMMENDATIONS FOR CHANGES IN CEPA

1) **Amend Sec. 41 (2) to say "no person shall import any toxic substance specified on the List of Prohibited Substances in Part I of Schedule II."** This list contains the substances considered by Environment Canada to be the most dangerous for the environment. Since all waste disposal facilities release contaminants, these substances should not be imported for disposal purposes.

2) **Amend Sec. 45 (3) to specify that the Governor in Council has the power to pass regulations banning the import or export of a hazardous waste.** The legislation and regulatory powers are currently written in ways that specify the approvals process. This implies that if you follow certain provisions, you have the right to export or import wastes. This should be revised to make it clear that there is not a right to import or export wastes.

3) **Add a section to CEPA that gives the Federal Government the responsibility to control the export and import of municipal non-hazardous solid waste.** This change is necessary because the export and import of municipal waste is becoming a serious issue, however, because of the international aspects involved, provincial governments do not have the power to control it.

RECOMMENDATIONS FOR CHANGES IN REGULATIONS

1) **Revise the regulations to ban export of hazardous waste for disposal to non-OECD countries.** This change is required to fulfil commitments made under the Basel Convention.

2) **Revise the regulations to phase out the export of hazardous wastes for recycling to non-OECD countries by December 1997.** This change is needed to fulfil commitments made under the Basel Convention.

3) **Revise the regulations to include a provision requiring waste exporters and importers to have plans for phasing out the production of the waste being exported or imported. Each agreement to import or export should include a specific date after which the import or export will no longer be allowed.** This provision is required to move us toward the objective of minimizing the production of hazardous wastes and to ensure that a few communities do not become on-going dumping grounds.

4) **Revise the regulations to specify certain wastes that may not be imported for disposal or recycling except with special authorization.** This provision is required to reduce environmental contamination.

5) **Remove Part III of the Regulations to end the special provisions for the "green list" of wastes destined for recycling.** The "green list" contains many substances, such as lead-acid batteries, that have caused serious environmental problems at recycling facilities. Therefore, it should not be possible to export or import them without approval from the affected countries.

6) **Develop a new regulation on the export and import of municipal solid waste.** This regulation should be based on the principle of banning or phasing out the import and export of municipal waste.

ENDNOTES

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3. Article 6, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989.

4. Preamble to Basel Convention.

5. In the definitions under the Basel Convention, recovery "includes resource recovery, recycling, reclamation, direct re-use or alternative uses."

6. Technical Working Group of the Basel Convention, "Draft Paper on Transboundary Movements of Hazardous Wastes Destined for Recovery Operations", May 1994, p. 9. For an in-depth assessment of the need for banning waste export including for recycling, see Greenpeace, "The Case for Prohibiting Hazardous Waste Export including Recycling, From OECD to Non OECD Countries at the Second Conference of the Parties to the Basel Convention," February 1994.

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8. Personal communication in letter from John Myslicki, Chief, Hazardous Waste Management Division, Environment Canada, August 30, 1994.

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25. Ibid., p. 4.

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28. See for example, the Citizens Clearinghouse for Hazardous Waste, Everyone's Backyard: The Journal of the Grassroots Movement for Environmental Justice, Falls Church, Virginia. See also, Andrew Szasz, EcoPopulism: Toxic Waste and the Movement for Environmental Justice, University of Minnesota Press, Minneapolis, 1994.

29. "Towards Social Equity in Waste Management," 1993, p. 3.

30. Joel S. Hirschhorn & Kirsten U. Oldenburg, "From Facility Siting to Waste Reduction," Forum for Applied Research and Public Policy, Fall 1987, p. 99-100.

31. See for example, United States Environmental Protection Agency, Deposition of Air Pollutants to the Great Waters, May 1994, p. 60.

32. Seventh Biennial Report on Great Lakes Water Quality, 1994, p.34.

33. Technologies and Management Strategies for Hazardous Waste Control, 1983, p. 184.

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35. For a critique of having different export-import requirements for wastes destined for disposal and for recycling, see Greenpeace, When Green in Not, November 1992.

36. In support of this argument, former Ontario Environment Minister Ruth Grier said, "Whether we put it [garbage] on a catapult aimed at the neighbour's property, or on a train bound for Kirkland Lake, it's our old standby NIMBY - Not In My Backyard... The NIMBY solution is not an acceptable alternative to waste reduction through local responsibility... The government's environmental policy is based on personal and social responsibility." ["Remarks to the Canadian Institute for Environmental Law and Policy Municipal Solid Waste Management Conference," January 23, 1993.]

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42.CEPA, s.29(2).

43.Pest Control Products Regulations, CRC 1978 c.1253, s.18(b).

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45.Ibid., ss.29(1) and (3)

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49.S.C. 1992, c.37.

50.R.S.O. 1990, c.I.13.

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72.U.S. EPA, "Regulation of Genetically Engineered Substances under TSCA," in United States Congress, House of Representatives Committee on Science and Technology, The Environmental Implications of Genetic Engineering, pp.18-19.

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76.See Muldoon, CEPA, Toxic Substances and Pollution Prevention.

77.Johanneson v. West St. Paul (1952), 1 S.C.R. 292.

78.Re Regulation and Control of Radio Communication (1932), A.C. 304.

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98.RSC 1985, c.F-10.

99.SC 1990, c.22.

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101.Ibid.

102.This would include: strain or variety history; life cycle; requirements for growth, survival and replication; potential for toxic production; specific resistance factors; extra chromosomal genetic elements; potential to transfer genetic material; antibiotic susecptibilty and resistance; and survival, competitive and environmental dispersal characteristics.

103.This might include: potential for consumer or occupational exposure; infectivity, toxicity and pathogenicity on plants, animals, and microorganisms; degradation or other modifications to the structural integrity of target and non-target substances; and effects on the integrity and functions of ecological systems and cycles.

104.This provision is based on Council Directive of 23 April 1990 on the Deliberate Release into the Environment of Genetically Modified Organisms (90/220/EEC), Part B, Article 5, s.2(a)(v).

105.See New Substances Notification Regulations for Biotechnology Products under the Canadian Environmental Protection Act (July 1993 Draft).

106.See Food Production and Inspection Branch, **Regulatory Proposal:** Assessment Criteria for Determining Environmental Safety of Genetically Modified Plants (Ottawa: Agriculture and Agri-Food Canada, June 1994).

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110.R. Northey and J. Swaigen, "Environmental Assessment," in Swaigen, Environment on Trial, pp. 189-191.

111.See, for example, note 90, supra.

112.CEPA s.71(1)(d) provides a model for such public notice requirements.

OCEAN DUMPING

By

Chris Rolfe
for the
WEST COAST ENVIRONMENTAL LAW ASSOCIATION

September 1994

1.0 Introduction

Once garbage has been dumped into the ocean, it becomes invisible. And the sheer size of the sea has contributed to our view of the oceans as a limitless dumping ground. This means efforts to control dumping have not been as strong as they could be. The complex mix of pollutants entering the sea - urban runoff, sewage outfall, airborne contaminants, industrial and agricultural discharge, oil and plastics - makes the task of controlling marine pollution even more difficult.

Strict controls on ocean dumping will have only a limited impact on marine pollution as most of it (an estimated 80% in Canada) comes from land based sources. However, amending the ocean dumping part of CEPA is still essential to reflect the guiding principles of environmental protection.

Amending this part to harmonize with the rest of the Act will also remedy the haphazard way that CEPA was put together. The Ocean Dumping Control Act was lifted as a whole into CEPA.

Required changes to the ocean dumping provisions of the Act include:

(1) consistency with the guiding principles of the Act, such as pollution prevention and polluter pays;

(2) consistency with Part I of the Act, setting out environmental quality objectives guidelines and codes of practice;

(3) expanding the definition of ocean dumping;

(4) strengthening public participation rights;

(5) increasing enforcement and monitoring; and

(6) increasing the public information program for the ocean disposal action plan.

2.0 Consistency with Guiding Principles

2.1 Pollution Prevention

Pollution prevention requires generators of waste to avoid waste creation, rather than consider how best to dispose of and treat waste. CEPA should encourage decreased waste generation as a higher priority than its current goal of improved waste

management. Agenda 21 encourages states to address degradation of the marine environment by taking appropriate steps to stop ocean dumping (Chapter 17, Article 17.30(6)(ii).

Using the pollution prevention approach, CEPA could be amended to require ocean dumping permit applicants to show there are no means of avoiding the creation of the dumped waste in the first place. Applicants could also be required to prove that ocean dumping of the waste is the most environmentally benign disposal method and that the dumping will not pose a long-time hazard to the environment.

2.2 Polluter Pays

Polluter pays is a fundamental principle of modern environmental law. The polluter pays principle is an essential part of the Green Plan which explicitly states that whoever causes environmental degradation or resource depletion should bear the full cost of remediation. This guiding principle should be enshrined in CEPA. The polluter pays principle should dictate the cost of dumping.

To reflect this principle, ocean dumping fees should include the cost to society of any environmental damage caused by dumping (or caused by the combined effects of different dumpers and other polluters), the cost of processing the application including the cost of technical analysis, cost of the public consultation, and the cost of enforcement of the Act related to the terms and conditions of the permit if any.

CEPA should be amended to allow permit fees to be set on a polluter pays basis. A sliding scale emission charge system should, amongst other things, be based on the volume of material dumped. Also, if the principle of pollution prevention and the requirement that dumping be the most environmentally benign disposal method allow the disposal of toxic materials, the dumping charge should vary according to the toxicity of the materials dumped. Finally, fees should incorporate the costs of assessment, public consultation, monitoring and enforcement activities. The flat rate fee adopted in the Phase 1 Amendments is not consistent with the polluter pays principle.

3.0 Consistency with Part I of CEPA

The ocean dumping part of the Act should be linked to Part I of the Act to ensure that the environmental quality objective guidelines, release guidelines and/or codes of practice apply to ocean dumping permit applicants as well. This information would be extremely useful to the public to assess the environmental impact of proposed ocean dumping. The officials responsible for assessing applications for ocean dumping permits should take into account whether or not any of the voluntary instruments of Part I of CEPA apply or need to be accounted for in an application for permit. The applicant should be required

to show compliance with all relevant CEPA environmental quality objectives, release guidelines and/or codes of practice in the generation of waste that is dumped, as well as the loading and dumping of wastes at sea.

4.0 Expanded Definition of Dumping

The current definition of dumping is not broad enough. It covers "deliberate disposal at sea from ships, aircrafts, platforms or other anthropogenic structures". It should be expanded to cover more locations such as explicitly prohibiting dumping from wharves and disposal of debris in the intertidal zone. Destruction, and subsequent dumping, of artificial islands and other manmade structures without a permit should also be explicitly prohibited.

5.0 Increased Public Participation

Currently, the avenues for public participation in the granting of ocean dumping permits are limited. There is no right to request a Board of Review hearing for anyone other than the permit applicant, although members of the public can obtain a Board of Review hearing after a disposal permit has been granted if the Minister "considers it advisable ... to inquire into complaints from members of the public."[1] In addition, public notice of actual permits can occur just one day before actual dumping begins, thus virtually eliminating any opportunity for public comment.

The public would likely be more cooperative in relation to ocean disposal activities if it could be involved more directly in the decision making process. We recommend increasing the avenues for public participation in ocean dumping permit decisions in accordance with our recommendations for increased public participation in other CEPA activities. The Act should be amended to allow any interested member of the public to appeal the granting of a permit. This would require a mechanism for notifying members of the public when permits are granted and specifying a longer period of time between the date a permit is granted and the date that dumping may occur.

6.0 Increased Enforcement and Monitoring

In the past, little enforcement action was taken by officials to ensure that correct dumping procedures were carried out. Dumping frequently occurred prior to reaching the dump site and environmental groups involved in citizen monitoring of dump activities were sceptical of the efforts that were made. The Fraser River Action Coalition

reported that monitoring of the Point Grey dumpsite off Vancouver consisted of "eyeballing" the site.

There also appears to be little scientific effort devoted to determining the environmental effects of ocean dumping. The proposed new Phase 2 regulations may not adequately address cumulative effects and the long term fate of chemicals in the marine ecosystem[2]. For example, there is evidence that contaminants in the ocean concentrate near the water surface where much ocean life is also concentrated, increasing the potential for contaminants to work their way up the food chain[3].

To address repeated criticisms of the monitoring and enforcement of ocean dumping activities, (as outlined in the CEPA Evaluation Report) Environment Canada has pledged, under the Ocean Dumping Action Plan, to implement a dumpsite monitoring program and increase enforcement. Interim National Dumpsite Monitoring Guidelines and National Inspection Plans have been designed to achieve these goals. The government's commitment to increased enforcement and monitoring is commendable. However, since funding for the Ocean Dumping Control Action Plan is dependent on Green Plan funding, with no guarantee of ongoing commitment to fund these activities, monitoring and enforcement could become self financing. One way to finance increased monitoring would be to establish a fund paid for by a portion of the fees paid by permit applicants. The Act should be amended to provide for environmental effects monitoring, similar to that required by the Fisheries Act pulp pollution regulations, either directly by dumpers or by payment to an environmental effects monitoring fund. Environmental effects monitoring should be required for all dump sites.

As recommended by the CEPA Evaluation Report, Environment Canada should give the monitoring element of the ocean dumping program higher priority since a lack of information on the environmental effects of dumping limits the effectiveness of the program and it is difficult to decide how to improve the regulations without information on the effectiveness of current regulations.

7.0 More Information Awareness

The government has reported in the CEPA Report for the period April 1992 to March 1993, that the Ocean Dumping Control Action Plan includes a research and information program to address persistent plastic debris in the marine environment. This important environmental problem has received little attention. The public information program should be expanded to make citizens aware of the problem and recognize their responsibility as part of the solution.

8.0 Recommendations

The ocean dumping part of CEPA should be amended as follows:

(1) Using the pollution prevention approach, CEPA could be amended to require ocean dumping permit applicants to show there are no means of avoiding the creation of the dumped waste in the first place.

(2) Applicants should also be required to prove that ocean dumping of the waste is the most environmentally benign disposal method and that the dumping will not pose a hazard to the environment.

(3) A sliding scale emission charge system based on the volume and toxicity of the materials dumped as well as the assessment fees and public consultation and enforcement activities should be adopted.

(4) The ocean dumping part of the Act should be linked to Part I of the Act to ensure that the environmental quality objective guidelines, release guidelines and/or codes of practice apply to ocean dumping permit applicants.

(5) The definition of ocean dumping should be expanded to include dumping from wharves, disposal in the intertidal zone, destruction and subsequent dumping of artificial islands and other manmade structures.

(6) The Act should be amended to require a period of time for public comment on ocean dumping permit applications before permits are granted.

(7) The Act should be amended to allow any interested member of the public to appeal the granting of a permit. This would also require a longer period between when a permit is initially granted and when dumping may occur.

(8) The Act should be amended to require environmental effects monitoring, similar to that required by the *Fisheries Act* pulp pollution regulations, for all ocean dumping activities. Where many permit holders use the same site, they should be required to make payments to the government to cover their share of environmental effects monitoring activities by the government.

ENDNOTES

1. Section 89(3).

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3. Weber, Peter "Safeguarding Oceans" in Lester R. Brown ed. State of the World 1994 (W.E. Norton, 1994) at 50.

COASTAL ZONE MANAGEMENT

Issues for the Five-Year Review of CEPA

by

Janice Harvey
Conservation Council of New Brunswick

September 1994

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1.0 INTRODUCTION

The need to regulate human activities within Canada's coastal zones has been recognized by some, and hotly debated by many, for several years. The fact that Environment Canada is looking to the CEPA review to address at least part of the need for coastal zone management (CZM) indicates an ongoing interest and desire within that department to use whatever tools are at its disposal to "get at" some of the outstanding issues surrounding CZM in this country.

1.1 Purpose

This paper was prepared by the Conservation Council of New Brunswick to assist the House of Commons Standing Committee on Environment and Sustainable Development (the "Committee") in its legislated five-year review of the Canadian Environmental Protection Act (CEPA). In response to interest by Environment Canada regarding federal action on coastal zone management, this paper will assess the existing and potential role of the Canadian Environmental Protection Act for coastal zone management. To do this, it will first outline the broad goals and objectives that a coastal zone management regime should meet and the range of issues which must be addressed in a successful coastal zone management regulatory regime. Second, it will outline the current federal regulatory regimes which impact on the coastal zone, both in Canada and the United States. Finally, it will propose an approach to CZM which the federal government might consider, with special attention given to the role CEPA could play in this.

1.2 Definitions

For the purpose of this paper, the definition of coastal zone will be that used by the federal Coastal Zone Management Team in their "Coastal Zone Management Issue: Draft Discussion Paper" prepared for the CEPA Review and dated October 28, 1993. It is as follows:

The area that includes the ocean coastline and adjacent areas directly affected by the interaction of the land and ocean environments, and extending as far seawards as the maximum limits of national jurisdiction and control within which Canada has managerial rights and responsibilities in international law, and extending as far landward as deemed necessary to achieve the objectives of the management program (p.5).

The CZM Review Team acknowledges the need for CZM within fresh water and marine systems, but limits the focus of its discussion paper to the marine environment. Likewise, since the writer's expertise is with marine systems, this paper is also specifically directed towards marine coastal zones. Nonetheless, the writer assumes that there is an equal need for both marine and fresh water coastal zone management, and any attempt to establish regulatory regimes to accomplish this should encompass both. For the most

part, the goals, objectives and issues described below will apply directly or can be adapted to both marine and fresh water coastal zones.

1.3 Scope of Coastal Zone Management

The coastal zone as defined above arguably presents the most complicated environmental regulatory and management challenge governments might face. On a national scale, coastal zone management must respond to the peculiarities of three very different ocean coasts (Arctic, North Pacific and North Atlantic) constituting 244,000 kms of coastline, the longest in the world, and 3.7 million square kms of continental shelf, the second largest in the world[1]. Add to this the Great Lakes, and all but two provinces are coastal. In many cases jurisdictions cross national borders as well as provincial.

Within each of the major systems are distinct subdivisions with their own ecological, oceanographic, hydrological, geographic, and socio-economic structures, such as Hudson's Bay and James Bay, the Gulf of St. Lawrence, the Bay of Fundy, Puget Sound, Queen Charlotte Sound, Beaufort Sea, and each of the Great Lakes to name only a few. Within each of these again, there are dozens of smaller zones with their own unique characteristics. In addition, each and every river flowing into these bodies has a potential impact on coastal waters, theoretically requiring CZM to encompass entire watershed drainage basins. Taking the Great Lakes, Hudson's Bay and the three oceans, one could argue that the entire land mass of Canada (not to mention a huge portion of the United States), should be subject to the provisions of a coastal zone management policy and regulatory regime.

To illustrate, the Bay of Fundy which constitutes New Brunswick's southern boundary and Nova Scotia's northwest boundary, is part of a larger marine system called the Gulf of Maine. The Gulf of Maine watershed drains 165,185 square kilometres of land located in three states and three provinces (Massachusetts, New Hampshire, Maine, Quebec, New Brunswick, Nova Scotia), including the entire state of Maine. To focus only on the Canadian territory involved, fully 56 per cent of the land mass of New Brunswick is implicated, with lesser percentages of the other two provinces (Nova Scotia 36 per cent, Quebec .45 per cent).[2] Statistics from a similar analysis of the CZM definition in relation to Hudson's Bay/James Bay would be simply overwhelming.

In addition to coastline and drainage basins, the definition takes the outer boundary of the coastal zone to the edge of Canada's Exclusive Economic Zone, more commonly known as the 200-mile limit. Recent federal action to extend Canada's jurisdiction beyond this limit may also have implications for CZM under this definition.

The coastal zone encompasses by far the greatest scope and complexity of any geographic designation for environmental management, both ecologically and legally. When one attempts to break this down into manageable portions, one is faced with the inevitability of arbitrariness, conflicting jurisdictions, and ultimately a limited effort at

best.

Nonetheless, coasts and the rivers which flow to them, constitute the single most important area of human settlement and economic activity worldwide. Almost two-thirds of the human population live on one-third of the global land mass adjacent to coasts.[3] In the United States, over 40 per cent of the population now lives within 50 miles of saltwater coastline[4]. In Canada, the trends are similar. Between 1971 and 1986, population on the Pacific coast grew by about 30 per cent, and on the Atlantic coast by 10 per cent[5]. By 1986, 18 per cent of Canada's population lived within 50 kilometres of a marine coast (4.5 million people). If the Great Lakes coasts were considered, this proportion would increase dramatically.

Clearly there is a need for coastal zone management, both to maintain quality of life, and to sustain human settlements and economic activity dependent on the coastal zone. Neglect has already led to dramatic declines in marine resources and environmental quality. The widely-held belief that vast bodies of water can absorb unlimited assaults has been soundly discredited. Given the magnitude of the task, the question is, What is the best way to ensure the environmental integrity of Canada's coastal areas?

2.0 GOALS AND OBJECTIVES FOR COASTAL ZONE MANAGEMENT

2.1 The Federal CZM Team

The federal CZM Team sets out several goals for CZM in Canada in its discussion paper:

- maintenance of a high quality coastal environment;
- identification and protection of critical coastal habitats;
- identification and conservation of biodiversity, especially of economically, culturally or ecologically valuable flora and fauna;
- resolution of conflicts between incompatible activities;
- identification and control of activities that have an adverse impact on the coastal and marine environment;
- raising public awareness;
- control of pollution from land-based sources;
- rehabilitation of damaged ecosystems.

Each of these is important in its own right and could be achieved through relatively straight-forward legislative changes or policy tools. Collectively, however, they fail to embrace the full range of considerations necessary to protect Canada's coastal zones. Nor do they identify any specific targets or environmental criteria to be met by policies or regulations. Some are too general to be useful at all. Because of the complexity inherent in coastal zones, a more deliberate, comprehensive approach must be taken. Specifically, an ecosystem-based approach to managing human activities in coastal zones is necessary.

2.2 An Ecosystem Approach to Coastal Zone Management

Within every coastal zone, a number of ecological functions are at work. They are the basis of aquatic food webs and biological productivity. These functions combined with other location-specific factors such as land forms (including the sea bottom), currents, tides, temperatures, and climate, support the marine plants and animals (marine biodiversity) resident in or frequenting the zone. Some of these, in turn, support the human communities at water's edge.

All species including humans, are vulnerable to disruption should these functions and factors change. Consequently, the primary goal of CZM should be to maintain ecological and biological functions, and to prohibit activities which may disrupt the ebb and flow of other natural features. The following measures are fundamental components to an ecosystem-based approach to CZM.

2.2.1 Ensuring the Free Flow of Waters

Currents, tides and river flows are essential to marine species. They move food throughout the zone and disburse larvae. Vertical upwellings bring nutrients from the sea floor to the upper reaches of the water column. Anadromous species depend on access to rivers for annual spawning migrations. A CZM regime must be able to prohibit the interruption of these flows, caused by dams, causeways and other structures. It must also provide for the removal of existing structures now interfering with the free flow of tides and currents and the subsequent free movement of fish.

2.2.2 Maintaining Nutrient Production and Biological-Physical-Chemical Properties

Biological productivity is a measure of a region's ability to support life. As productivity deteriorates, so does a coastal zone's ability to support the wide range of marine life which frequents it, from tiny benthic organisms to the great whales. Nutrients along with sunlight are the basis of phytoplankton production on open waters. They also provide direct support to other marine organisms at the base of the food chain. Nutrients are generated within a variety of micro-systems along coastlines including salt marshes, rockweed and kelp beds, mudflats, estuaries, and in certain underwater zones where benthic organisms are particularly abundant.

In addition, the biophysical/chemical profile of coastal waters is a critical factors in ecosystem functions, and in habitat suitability for marine species. These factors are often changed by inputs such as contaminated and/or heated effluent or oxygen-demanding substances, suspended solids and silt, etc. A CZM regime must be able to protect these areas of nutrient production and maintain biophysical/chemical structures in coastal waters. The greatest threats to these areas are pollution, largely land-based from both point- and non-point sources (but also water-based such as aquaculture, ship traffic and port operations), development such as draining wetlands, road building or backfilling inter-tidal zones, and resource extraction such as clearcut forestry or rockweed harvesting.

2.2.3 Ensuring the Integrity of Critical Natural Areas and Habitat

Coastal zones support a wide range of terrestrial and aquatic species, both plant and animal. Many of these species are adapted to the unique zones at the edge of land and sea and cannot survive either further inland or further out to sea. The immediate area of interface between land and sea is particularly vulnerable due to human settlements and development. Erosion, clear-cutting, quarrying, recreational use of beaches, road building and housing all impinge on the structure and stability of coastal land and the quality of coastal waters.

In addition, water-based infrastructure such as fish farms, marinas, wharves, dive sites, offshore resource development sites, to name a few, place pressure on marine habitat

and environmental quality. A CZM regime must be able to protect species habitat on coastal land, in the inter-tidal zone and in open water, and prevent over-development of the coastline and coastal waters by controlling the location, density and intensity of developments, including prohibiting development where and as necessary. It must also be able to constrain the manner in which human activity is carried out, such as the use of heavy impact resource harvesting equipment or recreational vehicles/crafts.

2.2.4 Ensuring the Survival of Vulnerable Species

In the absence of a federal endangered species act, attention must be given to the fragile presence of many vulnerable species in the coastal zone. Commercial fish species are, theoretically, protected by the Fisheries Act. However, marine mammals, such as the endangered (COSEWIC) North Atlantic Right Whale have no legal basis for protection. In conjunction with the habitat provisions, a CZM regime must provide for the direct protection of species, dependent at least in part on the coastal zone, listed by COSEWIC as in danger.

2.3 Science to Support an Ecosystem-based Approach to CZM

The scientific basis for determining the specific parameters of an ecosystem-based approach to managing human activities in the coastal zone is sadly lacking. Little information exists on the health of coastal ecosystems as total systems, nor is there a baseline of information against which to assess our current status. Single species or single contaminant indicators are still the tools regularly employed in assessments of ecosystem health. This is in direct contrast to the need to assess the primary functions of an entire ecosystem, and the cumulative effects, both positive and negative, of human interventions.

A scientific agenda must be established which provides system-specific and system-wide information to support a coastal zone management regime based on ecosystem maintenance. Indicators would include biological productivity, biophysical/chemical properties, biodiversity, the structure of biological communities, and the interrelationship of species within those communities, as well as acreage and integrity of wetlands and mudflats, health of estuaries, etc.

3.0 EXISTING FEDERAL LEGISLATIVE FRAMEWORKS

3.1 Canada

Currently, there is no reference to or provision for coastal zone management in CEPA. Nor is it addressed in an serious way in other legislation. According to the federal CZM team, 15 federal departments and agencies currently administer over 40 pieces of legislation relating to the marine environment (p.9). In spite of this, or more likely because of it, only a piecemeal approach has been taken to date to address coastal zone management, and with spectacularly poor results.

Following is a brief overview of existing federal legislation relating to coastal and marine environments.[6]

3.1.1 Water Pollution

Arctic Waters Pollution Prevention Act - prohibits the deposit of any waste in any marine arctic waters, or on land where the waste may enter arctic waters, except as authorized by regulation; controls shipping and other marine activities.

Canada Water Act - authorizes the federal government to designate water quality management areas within federal jurisdiction (including interjurisdictional and international or boundary waters) and to establish water basin management agencies under federal-provincial agreements; prohibits polluting of areas so designated. No water quality management areas have ever been designated. Administered by Environment Canada.

Canadian Environmental Protection Act - regulates the release of pollutants, including nutrients, into water, as well as air and on land, in order to protect human health. These are regulated on a substance-by-substance basis and are primarily intended to control the release of toxic chemicals; authorizes the formulation of environmental objectives, guidelines and codes of practice. Administered by Environment Canada.

Fisheries Act - contains various regulations controlling pollution from specific industries. Section 36 broadly prohibits the deposit of deleterious substances in water frequented by fish and offers control over upstream sources as well as offshore operations. Administered by Environment Canada for Fisheries and Oceans Canada.

3.1.2 Pollution from Ships

Canada Shipping Act - provides for protection of marine environment from shipping activity under the following regulations: Dangerous Goods and Noxious Liquid Substances; Garbage Pollution Prevention; Non-Pleasure Craft Sewage Pollution Prevention; Oil Pollution Prevention; Pollutant Substances. It also provides for the

declaration of public harbours and for the proper transport of dangerous goods by sea; sets safety and equipment standards (as does the Transportation of Dangerous Goods Act); provides for the Ship-source Oil Pollution Fund to compensate for oil spill costs and damage. Administered by the Coast Guard, Transport Canada.

Fisheries Act - Chapter 14, Section 36 also covers materials or substances dumped from ships.

3.1.3 Ocean Dumping

Canadian Environmental Protection Act - Part VI regulates ocean dumping through permit system (under review), in fulfilment of Canada's commitment as a signatory to the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention 1972). Some substances are prohibited, others are restricted.

3.1.4 Offshore Development

Oil and Gas Production and Conservation Act - regulates offshore oil and gas drilling and provides for measures to reduce marine pollution from these activities. The Act is currently under review (1992) with the goal of increasing safety controls and pollution measures.

Canada-Newfoundland Atlantic Accord Implementation Act -prohibits spills and regulates pollution from exploration, production, and transportation of petroleum in the offshore area.

3.1.5 Environmental Impact Assessment

Environmental Assessment Guidelines Order - would potentially subject all proposals located on federal lands, or proposals being federal financed, or proposals which would affect an area of federal responsibility, or proposals undertaken by a federal department, to an EIA; implemented at discretion of proponent. Administered by FEARO.

Canadian Environmental Protection Act - Part IV gives the Minister of Environment the power to require specific information regarding an undertaking on federal lands or submarine areas to determine its environmental impact; provision does not state what action the Minister may take based on this information.

3.1.6 Species Protection

Canadian Wildlife Act - establishes National Wildlife Areas where activities which could disrupt wildlife are restricted. Management plans are developed for each NWA, however power to prevent harmful development is limited (the New Brunswick terminus for the

Fixed Link to PEI runs through the Cape Jouriman NWA). The Act also prescribes endangered species, but there are no explicit regulations or Act to protect species at the federal level. Administered by Environment Canada.

Migratory Birds Convention Act - provides for establishment of migratory bird sanctuaries where activities are strictly controlled; provides for open and closed seasons for hunting migratory birds. Administered by Environment Canada.

Fisheries Act - Marine Mammal Regulations and Guidelines control activities such as hunting, whale watching, scientific research, collection of live specimens, and trade in marine mammal parts. Advisory Committee on Marine Mammals makes recommendations for quotas and scientific research. Administered by Fisheries and Oceans. The Act also stipulates the conservation of fish species and marine plants.

3.1.7 Protected Areas

National Parks Act - establishes and regulates national parks including marine parks. Regulatory powers include protection of flora and fauna, and cultural, historical and archeological resources; the management of fisheries; control of traditional renewable resource harvesting; granting of permits for removing sand, stone and gravel within a park; control of businesses and other undertakings; administration of roads; control of aircraft access. Administered by Heritage Canada.

3.1.8 Land and Water Use Planning and Management

Boundary Waters Treaty Act - addresses disputes regarding the use of boundary waters and questions involving rights, obligations and interests of Canada and the US along their common border.

Canada Water Act - see above.

NOTE: According to the federal CZM Team, although the Canada Water Act provides for water basin management plans, and the Boundary Waters Treaty Act provides for a dispute settlement mechanism, the application of both to marine waters is uncertain.
Navigable Waters Protection Act - addresses obstructions to navigation. The construction of structures in the water such as wharves, aquaculture sites, pipelines and bridges must be approved by the Minister of Transport, who may apply conditions on their construction. The Minister must approve dumping of fill and excavation of materials from the waterbed, including artificial island construction and harbour dredging; he/she may also require removal of debris left by work crews. No approval is needed for a work constructed under an Act of Parliament. In addition, there is high degree of Ministerial discretion in implementing provisions of the Act.

Migratory Birds Convention Act - provides for the appointment of a Board by the

Governor in Council, which has jurisdiction over designated harbours for the purposes of administration, management and control of the harbour.

Pilotage Act - requires a person to have a satisfactory degree of skill and knowledge of the waters to qualify for a pilotage license or certificate for the area; interpretation could have environmental implications.

3.1.9 Habitat Management and Protection

Fisheries Act - Sections 35 and 37 deal with fish habitat; there is also a departmental policy on fish habitat management. The prohibition against activities which harmfully alter, disrupt, or destroy fish habitat could control development activities in the coastal zone. The Governor in Council can make regulations "respecting the conservation and protection of fish" and the "conservation and protection of spawning grounds". The Act also addresses the conservation of fish passes and watercourses, with provisions to permit the safe and unimpeded movement of fish past a watercourse obstruction. It also regulates the exploitation of marine plants, many of which are critical habitat to marine organisms. Licences are issued to marine plant harvesters which stipulate gear to be used, manner of harvesting, harvest quotas, and areas of harvest.

Ramsar Convention - Canada has signed this international convention which requires policies and legislation to protect wetlands, promote education, monitor the status of wetlands, and develop action plans for specific sites. However, no federal legislation, with the possible exception of the Fisheries Act's habitat provisions, is equipped to protect tidal wetlands (salt marshes).

3.1.10 Marine Resource Management

Coastal Fisheries Protection Act - limits the entry of foreign fishing vessels into Canadian fisheries waters and prohibits fishing and removal of marine plants without authorization.

Fisheries Act - provides for the conservation of commercial fish stocks through management regimes; provides for the conservation of marine plants.

Territorial Sea and Fishing Zones Act - empowers the Governor in Council to prescribe fishing zones; provides for establishment of baselines that define the inner limit of the territorial sea.

In addition to these federal provisions, each coastal province has a number of Acts and Regulations which also relate to the coastal zone in each of the categories above.

3.1.11 Deficiencies

Two major deficiencies are obvious from this cursory review of legislation. First, in spite

of the relative strength of existing laws, federal and provincial governments both have failed to ensure the integrity of coastal zones and the species which inhabit them. Second, existing legislation, either singly or collectively, does not provide for a comprehensive, ecosystem-based approach to protecting the coastal regions from decline.

In particular, except for the ambiguous potential of the Canada Water Act, federal regulations do not adequately provide for land and water use management, shoreline protection, and species and habitat protection, or a research regime to support ecosystem-based management.

The Green Plan acknowledged this problem in 1990 and proposed a partial solution:

> Canada already has many laws and regulations aimed at protecting our offshore and marine environments.... However, our commitment to effective management and protection of Canada's ocean resources requires a stronger legislative base. Therefore, by the end of 1991, a discussion paper on a Canada Oceans Act will be released by the Minister of Fisheries and Oceans for public discussion. The proposed Act will, among other things, provide a legal basis for the protection of the marine environment consistent with international law and designation of marine protected areas.[7]

The Oceans Act discussion paper has yet to be released, and the current government's commitment to this Green Plan initiative is unclear. Should it materialize in the near future, it will add yet another regulatory layer to the existing array. Depending on how marine environment is interpreted, it may or may not encompass the entire coastal zone as defined above. If it does not, the regulatory gap between inland and offshore will continue.

3.2 The United States

A full comparative study of national CZM regimes is not within the scope of this paper. However, it may be useful to look briefly at the experience in the United States.

The United States implements many of the same legislative initiatives as Canada in relation to coastal and marine environments. At both federal and state/provincial levels, these include environmental impact assessment, ocean dumping regulation, oil spill/hazardous wastes, offshore oil and gas, open space programs, endangered species protection, aquaculture regulation, point source pollution control, and marine debris programs. These do not differ substantially from Canadian approaches.

In addition to these, however, US jurisdictions implement coastal management programs, water quality standards, sewage treatment requirements, non-point source pollution programs, wetland and sand dune regulation, and marine and estuarine protected areas.[8] This section will review aspects of US federal jurisdiction not employed in Canada.[9]

3.2.1 Land and Water Use

The Coastal Zone Management Act (CZMA) establishes national land use policies for coastal zones through a voluntary program with the states. Under the Act, the federal government provides funds to those coastal states willing to prepare coastal management programs (CMPs) which identify permissible land uses, establish priority uses, designate areas of concern, protect and provide public access to coastal areas, control coastal erosion and control non-point source pollution. Twenty-nine states have developed CMPs approved by the National Oceanic and Atmospheric Administration (NOAA) and receive $1-2 million annually to administer their programs (p. A-2).

This Act, in conjunction with the National Environmental Policy Act, which requires environmental impact statements (EISs) to be prepared for all federal actions and legislative proposals that significantly affect the quality of the human environment, together provide key management and advocacy tools (in conjunction with litigation) for the coastal and marine environments. EISs must consider mitigation measures, less damaging alternatives and the cumulative effects of individual projects (p. A-3).

The Clean Water Act mandates the National Estuary Program of the EPA, where significant estuaries are designated "national" and a 5-year program is initiated with federal funding. The program assesses trends in water quality, natural resources and uses; collects and assesses data on toxics, nutrients and natural resources; assesses the impacts of point and non-point sources of pollution; develops plans for coordinated implementation; monitors effectiveness of actions taken, and reviews all federal financial assistance programs. At the end of 5 years, a comprehensive conservation and management plan is developed which recommends priority remedial actions and compliance schedules. As of 1992, 17 national estuaries had been designated (p. A-30).

3.2.2 Water Pollution

The Clean Water Act requires states to prepare Non-Point Source Pollution Assessment Reports and Management Programs to identify sources; water bodies unable to meet water quality standards without NPS pollution controls; best management practices (BMPs) to control NPS pollution; regulatory programs for enforcement and achieving BMPs; and an implementation schedule. Once NPS pollution management plans are approved, states are eligible for federal funding for implementation (p. A-14).

The 1990 Amendments to the CZMA require states with CZM programs to update and expand NPS pollution management programs established under the Clean Water Act, or risk funding cuts under both Acts. The CZMA also establishes minimum standards for addressing NPS pollution impacts on coastal waters. These require states to: identify land uses that contribute to coastal water pollution; identify critical coastal areas to be subject to management measures; implement management measures necessary to maintain applicable water quality standards; provide technical assistance to local governments;

allow for public participation; improve coordination among state and local agencies; and, if necessary, modify coastal boundaries to implement recommendations. Guidelines issued by the EPA in 1991 identify five major categories of NPS pollution for management by states: agricultural run-off, silvicultural run-off, urban run-off, dams, and shoreline erosion controls, and marinas and recreational boating (p. A-14).

3.2.3 Habitat Management and Critical Natural Areas

The Coastal Barrier Resources Act of 1982 creates a system of mapped, undeveloped barrier beaches and associated wetlands and estuaries. Rather than restrict development through regulation, the Act prohibits federal expenditures and financial assistance for flood insurance, disaster relief, road construction, marinas, community block grants, sewage treatment plants and similar projects. In 1990 the system was expanded from the Atlantic and Gulf coasts to include nearly 800,000 acres of undeveloped areas in the Great Lakes, Florida Keys, Puerto Rico and the Virgin Islands, as well as to secondary barriers along the Gulf and Atlantic coasts. A Coastal Barriers Task Force was to have reported to Congress by the end of 1993 on the effectiveness of the Act and the need for any new policies to ensure protection (p. A-28).

3.2.4 Protected Areas

The National Marine Sanctuaries Program was established under the Marine Protection, Research and Sanctuaries Act. This authorizes the designation of discrete areas of the marine environment as national marine sanctuaries. Such designation requires a resource assessment, preparation of an EIS, public hearings, preparation of a sanctuary management plan and regulations; review by Congress and adjacent states; and final approval by the Secretary of Commerce (p. A-29).

The National Estuarine Reserve Research System, established under the CZMA, provides for a national system of estuarine reserves representative of the various estuarine types in the US. Reserves are nominated by the Governor of the state in which the candidate site is located. If federal criteria are met, funds are provided to states for site selection, development of a management plan, implementation of research, educational and administrative programs, and any necessary acquisition of waters or land. Commercial operations are prohibited or severely restricted in reserves. Seventeen reserves have been established containing nearly 300,000 acres (p.A-31).

3.2.5 Species Protection

Both the Endangered Species Act and the Marine Mammal Protection Act have significant implications for coastal zone management. The first protects listed species, many of which are coastal or marine, and any "critical habitats", defined as those areas which have physical and biological features essential to the conservation of the species and which may require special management consideration. The second, in the interests

of protecting vulnerable marine mammal species, regulates incidental catches and the reporting of these (p. A-32-34).

3.2.6 Marine Research

Finally, the US federal government funds marine research through a number of programs in addition to those mentioned previously. These include: the National Sea Grant College Program; National Science Foundation; Outer Continental Shelf Environmental Studies Program; Land and Water Conservation Fund; National Coastal Resources Research and Development Institute; and Fish and Wildlife Conservation Fund. In addition, nine regional marine research boards established under the Marine Protection, Research and Sanctuaries Act, are to develop comprehensive marine research plans, set priorities for the protection of water quality and marine ecosystems, and administer research programs (p. A-36).

Clearly, federal initiatives in the United States are extensive. An assessment of the effectiveness of this legislation in actually maintaining or improving coastal zone health in that country is beyond the scope of this paper. Nonetheless, these measures provide some guidance as to the gaps in Canadian coastal and marine regulatory efforts.

4.0 A COASTAL ZONE MANAGEMENT FRAMEWORK FOR CANADA

Obviously, the status quo is not acceptable. As coastal environments and resources decline, coastal communities are hit hard, inflicting a toll of unemployment and economic decline, loss of culture and social cohesion, and individual and collective psychological trauma. The collapse of groundfish fisheries in Atlantic Canada has resulted in all of these effects. The piecemeal, happenstance approach to managing human activities in the coastal zone has contributed directly to this collapse, as well as many other environmental and resource problems.

4.1 The Federal CZM Team Approach

The federal CZM Team examined three options for addressing CZM in Canada: 1) maintain the status quo; 2) amend CEPA, evaluate the existing legislative framework and develop a national CZM policy; and 3) enact new CZM legislation. The Team's preferred option is 2, amending CEPA and a national CZM policy.[10]

CEPA's limited application to coastal zone management is acknowledged by the CZM Team. They state, "Due to the multi-faceted and multi-jurisdictional nature of CZM, CEPA is not an appropriate vehicle for addressing CZM as a whole in Canada... Although the existing legislative framework has allowed the federal government to sufficiently protect and manage particular aspects of the marine environment, it was not designed to provide for the protection and enhancement of coastal areas as ecosystems".[11]

Having said this, they recommend "a process involving a series of steps and a combination of policy tools at the disposal of the federal government allowing a more conscious effort to manage the coastal zones and their ecosystems". The steps include:

i) Amend CEPA Part VI to i) ensure environmental quality objectives and guidelines formulated under CEPA Part 1 and complied with during the assessment of ocean dumping permit applications; and ii) re-write the definition of dumping in Part VI to make it consistent with existing departmental policies such as treating disposal from wharves, disposal in the intertidal zone, and abandonment of artificial islands as ocean disposal.

ii) Identify gaps in the existing legislative framework related to water management and CZM and make provision to address these gaps within the appropriate legislation.

iii) Establish a federal interdepartmental process to i) define the roles and responsibilities of federal government departments as they relate to coastal areas in Canada; ii) reach agreement on the design of a coastal zone [management] framework in Canada; iii) develop a federal coastal zone management policy that

will form the basis for an eventual national coastal zone management policy.

4.2 An Alternative Strategy

4.2.1 The Need for a Federal Policy

The CZM Team is correct in saying that one piece of legislation will not suffice to protect coastal ecosystems. Nonetheless, the current hodge-podge is unworkable and inadequate. To achieve some clarity and efficiency in direction, a federal policy on coastal zone management is required, with the central goal of protecting ecosystem functions and other natural processes and conditions in coastal zones. Without a policy framework, a review of existing legislation to identify gaps would have no point of reference against which to measure. There would also be no context within which to develop new legislation. A federal policy based on ecosystem maintenance would unite the current disparate legislative measures and provide the impetus for appropriate additional legislation to be developed.

CZM policy development need not start from scratch. Current policies relating to environmental protection, documents such as the Green Plan and Agenda 21, preambles to existing legislation, and reports of advisory boards and commissions all provide language and intent which could be crafted into a federal statement on CZM. The task is to derive a coherent, comprehensive description of federal commitment to maintaining coastal and marine ecosystems.

4.2.2 Tools for Implementing Federal Policy

Within the context of such a policy, the federal government can identify a few strong, comprehensive tools by which policy can be implemented. These tools should address:

- pollution prevention and remediation
- coastal land and water use (watershed management)
- resource exploitation/extraction, renewable and non-renewable
- habitat, critical natural areas, and species protection
- ecosystem rehabilitation
- conflict resolution processes
- public participation in decision-making and implementation
- inter-jurisdictional cooperation, including international
- a supporting science and technology agenda

Where possible and logical, these measures should be consolidated into as few pieces of legislation as possible. As ecosystems function as coherent wholes, so should legislation protecting ecosystems. As described below, CEPA could become the legislative vehicle for coastal and marine pollution issues. The Canada Water Act may be an existing vehicle for accomplishing i) watershed management; ii) ecosystem rehabilitation; iii)

conflict resolution processes; and iv) interjurisdictional cooperation. Its potential and limitations should be investigated.

The promised Oceans Act could provide measures required for i) protecting habitat (other than that of commercial fish), critical natural areas (other than national parks), and in the absence of a federal Endangered Species Act, vulnerable coastal and marine species; ii) sustainable resource exploitation; and iii) a supporting science and technology agenda.

Each of these vehicles could stipulate full and effective public participation in both decision-making and implementation. They could provide for community-based state of the environment reporting and environmental monitoring, public participation on committees, boards and agencies established to accomplish objectives and in the development of management plans, public access to information, and public intervention opportunities in compliance and enforcement.

Strong environmental impact assessment provisions to assess all undertakings with a potential impact on the coastal zone should support each of these Acts, either as separate legislation or incorporated into the Acts themselves. This should include technology and gear assessments and proposed harvesting or extraction regimes.

4.3 An Expanded Role for CEPA

The CZM Team cites Parts I and VI as the vehicles within CEPA to address CZM. Part I allows for the establishment of environmental quality objectives, codes of practice guidelines, public education, and pollution prevention from land-based sources. Each of these provisions could be applied to coastal zone management. In addition to these, the research and monitoring provisions of Part I (7) could be directed towards an ecosystem-based CZM scheme. However, without the force of regulation Environment Canada would remain a minor player in managing the coastal zone and little improvement would result.

As for Part VI, the CZM teams admits that, "without major changes it cannot have a significant role in CZM". In spite of this, only minor adjustments are suggested. (These suggestions are separate from the amendments to this section now under development to ensure Canadian compatibility with international obligations vis a vis ocean dumping.)

Even in the absence of a national policy and co-ordinated multi-departmental strategy, Environment Canada could play a strong role in the coastal zone. With its current pollution-focused mandate, CEPA could develop as the single most important tool for preventing, limiting and remediating coastal and marine pollution from both, point and non-point sources. (Currently, the Fisheries Act has the strongest and broadest provisions for marine pollution control; however, their application is interpreted in the context of impacts on fish.)

4.3.1 A Coastal Zone Pollution Control Regime

Some existing regulatory powers within CEPA are relevant to the coastal zone; certainly toxics (especially from pulp mills) and nutrients are serious polluters of coastal waters. As amendments to these are developed and implementation strategies are improved, their application to coastal waters should be taken into account. Coastal zone management, however, implies a system-wide approach rather than a substance-by-substance approach.

A new part of the Act could be drafted to specifically address the need to protect coastal ecosystems from pollution. This would include a range of provisions allowing for direct federal intervention and for federal-provincial cooperation programs to be implemented at provincial or local levels.

To be effective, a pollution prevention regime for coastal and marine waters would be structured to protect ecological functions and biophysical/chemical properties in marine environments and might have the following powers and characteristics:

- through environmental quality objectives, prevent the entire spectrum of pollution sources possible in a coastal zone including sewage (the single most pervasive pollution problem in coastal waters), various types of run-of (non-point source pollution), wastes from aquaculture installations, and power plant and industrial discharges;

- control cumulative effects of multiple installations or operations;

- determine the pollutant carrying capacity of individual embayments, harbours and estuaries and ensure that carrying capacity is not exceeded;

- within the context of cumulative effect and carrying capacity, integrate pollution prevention and control across provincial boundaries where provinces share common water bodies. It would also be empowered to address international concerns;

- set performance standards sufficient to achieve remediation or restoration of degraded sites and ecosystems, and implement remediation measures.

There are considerable jurisdictional conflicts inherent in this approach, particularly at the federal-provincial level. The cooperative approach taken in the United States may be a model, whereby the federal government requires plans to be drawn up by the provinces for meeting certain environmental quality standards with financial incentives attached. In this situation, the federal government would establish environmental quality criteria based on the mandate of maintaining ecosystems, and provincial plans would be approved federally for funds to be provided for implementation. The federal government

may also require an accessible and comprehensive public participation process in the development of provincial plans.

4.4 Next Steps

While some land and water use issues could be addressed within a pollution prevention, control and remediation regulatory scheme, others fall outside the pollution spectrum. Since these are generally conflict-ridden and seen to infringe on both common property and private property interests, their treatment by federal agencies is sensitive. For CEPA to address these, there would have to be a major shift in the Act's focus and intent. This would be a lengthy and unwieldy process. Therefore, additional federal initiatives would be required to complete the spectrum of measures for effective, ecosystem-based coastal zone management.

In the face of multi-departmental jurisdictions in the coastal zone, a national policy on coastal zone management should be developed concurrently with CEPA improvements. Such a policy would inform a process of inter-departmental cooperation and give impetuous to new federal initiatives to address gaps. Without such a policy, coherence, comprehensiveness, and a credible ecosystem-based approach to CZM will be impossible to achieve.

Until a federal policy is in place, a review of other legislation should be done to identify opportunities to more fully consolidate marine pollution provisions within CEPA. This would mean removing existing responsibilities from other departments with attendant impacts on Environment Canada. Where this is possible and is consistent with a coastal zone pollution prevention and control mandate for CEPA, it should be pursued.

5.0 SUMMARY OF RECOMMENDATIONS

Taken together, a national ecosystem-based CZM policy and a few pieces of strategic, comprehensive legislation responding to that policy should provide an effective framework for coastal zone management in Canada.

5.1 Federal Coastal Zone Management Policy

In the absence of a federal policy, there is little to inform the review, amendment or development of legislation. Initiatives to develop that policy should begin immediately.

5.2 Comprehensive Pollution Prevention Regime Under CEPA

Within existing mandates, however, CEPA could consolidate and strengthen pollution-related measures in order to protect coastal ecological functions through the following measures:

i) Develop environmental quality objectives, guidelines and codes of practice explicit to maintaining ecological functions and biodiversity in the coastal zone.
ii) Direct research and monitoring efforts to support these objectives, guidelines and codes of practice.
iii) Strengthen Parts II-VI with a view to their applicability to environmental quality in the coastal zone.
iv) Develop a new Part to address pollution prevention, control and remediation in the coastal zone within the context of maintaining ecological functions, biological - physical - chemical structures, and biodiversity, as opposed to a substance-by-substance approach. It would cover both point and non-point sources and provide vehicles for federal-provincial cooperation in the development of pollution management plans, among other initiatives.
v) Provide for public participation in decision-making, development and implementation of management plans and measures, and in environmental quality reporting and monitoring; and for access to information.

5.3 Watershed Management

Examine the Canada Water Act to determine its ability to meet the needs for watershed management and other provisions stated above. Should it not have this ability, initiate the development of new federal coastal zone management legislation to accomplish this; or see that these provisions are included in a new Oceans Act.

5.4 Oceans Act

Proceed with the development of the Oceans Act which would include provisions for habitat, critical natural areas and species protection, sustainable resource harvesting and

extraction, and a science and technology agenda. If required, incorporate the provisions of 5.3.

6.0 CONCLUSION

Since there is currently no legislative framework for coastal zone management, this paper has been general in its approach inasmuch as specific language for amendments to CEPA is not provided. Instead, the range of measures required for effective CZM are presented, and within this range the important role CEPA can play is indicated. Certainly there is a need for the federal government to assume leadership in this important area. CEPA's five-year review provides the Committee with an opportunity to jump-start a critically important, complicated, multi-faceted initiative in CZM. This leadership is desperately needed if coastal ecosystem declines are to be turned around.

ENDNOTES

1. The State of Canada's Environment, Ottawa: Government of Canada, 1991, p. 4-4.

2. Gulf of Maine Council on the Marine Environment, Watershed Map, produced by Richard D. Kelly, Maine State Planning Office, 1992.

3. Dr. N. Myers, ed. Gaia: An Atlas of Planet Management. New York: Doubleday, 1984, p. 86.

4. Bulloch, D. The Wasted Ocean. New York: Lyons and Burford, 1989, p. 4.

5. The State of Canada's Environment. Ottawa: Government of Canada, 1991, p. 4-11.

6. This overview is taken from the Coastal Zone Management Issue Draft Discussion Paper (October 1993) prepared by the Coastal Zone Management Team of the federal government and a paper entitled "Assessing U.S. and Canadian Laws and Programs Affecting the Marine and Coastal Environment of the Gulf of Maine", prepared by the Marine Law Institute and the Oceans Institute of Canada for the Gulf of Maine Council on the Marine Environment (January 13, 1992).

7. Canada's Green Plan. Ottawa: Government of Canada, 1990, pp. 41-42.

8. Assessing US and Canadian Laws and Programs Affecting the Marine and Coastal Environment in the Gulf of Maine. Prepared by The Marine Law Institute in conjunction with the Oceans Institute of Canada for the Gulf of Maine Council on the Marine Environment, January 1992, p.3.

9. Information for section 3.2 is taken from the above document.

10. Federal CZM Team Discussion Paper, p. 1.

11. Ibid, p. 2.

REGARDING AIR QUALITY ISSUES

AND THE CEPA REVIEW

by

Ellen Schwartzel
for
POLLUTION PROBE

September 1994

1.0 SUMMARY OF RECOMMENDATIONS

The federal government has jurisdiction in two key areas pertaining to transportation emissions; fuel content and emission standards for new vehicles. While fuel content is regulated under CEPA, vehicle emission standards can currently be established through the Motor Vehicle Safety Act. Pollution Probe is recommending legislative changes in both areas; changes which we believe will allow for more effective control of urban smog.

(a) Fuel Content: Pollution Probe is recommending that the federal government take leadership in the introduction of reformulated gasoline, as well as diesel fuel across Canada. CEPA already provides the federal government with most of the necessary powers.

Two minor amendments to Section 47 of CEPA would help to clarify federal jurisdiction over fuel content;

i) The Act should recognize that fuels can contribute to air pollution not only upon combustion, but also through evaporation. Evaporative losses during fuel distribution was responsible for an estimated 6% of all volatile organic compound emissions in Canada in 1985.[1]

ii) The Act should be clearer about the definition of "significant contribution to air pollution", to ensure that the Federal government has adequate authority to protect air quality.

(b) Vehicle Emission Standards: Because vehicles contribute so significantly to Canada's smog problem, Pollution Probe is recommending that Canada fall in line with a number of U.S. states and British Columbia, which have either adopted or are planning to adopt the California Low Emission Vehicle program.

Pollution Probe is also recommending that the legislative authority to control vehicle emissions be transferred from the Motor Vehicle Safety Act, which is administered by Transport Canada, to CEPA.

Air Quality Monitoring: To address short-comings of Canada's ambient air quality monitoring program, Pollution Probe is recommending that Section 7 of the Act be revised. The revisions should ensure

- that Canadians are protected by an adequate ambient air quality monitoring network, capable of reflecting regional air quality concerns

- that ambient air quality data and analysis is made available to Canadians in a timely fashion

Objectives, Guidelines and Codes of Practice: To remedy inadequacies in the development of objectives, guidelines and codes of practice, Pollution Probe is recommending that Sections 8 and 9 of the Act be revised. CEPA should ensure that objectives, guidelines and codes of practice will be developed

-for all significant air contaminants
-with public participation
-with timelines or deadlines for achievement
-with some certainty of their being implemented
-with a periodic review process

2.0 INTRODUCTION

Canada has an international reputation for spectacular wilderness and for clean, cold air masses sweeping down from the arctic. As Canadians, we consider these features national treasures. In actual fact, the air quality experienced by many Canadians on a day-to-day basis is far from pristine. Air pollution problems are particularly acute in our larger cities; for example, Toronto, Vancouver and Montreal all suffer from summer smog problems, and in 1992, Toronto's air quality was rated as being worse than that of Chicago, Boston or Atlanta.[2] But smaller communities are by no means safe havens from air pollution. Residents in places like Cornerbrook, Newfoundland, Yellowknife in the Northwest Territories or Fort Frances, Ontario have to contend with chronically degraded air quality caused by local pulp mills or mining operations.[3] Traffic sources emit not only "conventional" air pollutants, but also proven carcinogens to ambient air; for example in the Windsor-Detroit-Sarnia area, more than 3,000 tonnes of benzene are emitted annually from car fuel tanks and tailpipes.[4] A detailed survey of air quality concerns across Canada was published by Pollution Probe in late 1992, and can be made available to members of the Standing Committee.[5]

Unfortunately, there is little evidence that the Canadian Environmental Protection Act has been effective in reducing or preventing air pollution problems in Canada. Ambient air quality guidelines for many important pollutants are either out-dated or non-existent. More significantly, they are merely guidelines, rather than enforceable standards. Ambient air quality monitoring networks and public reporting mechanisms are also inadequate in many parts of the country. Canadians cannot rely on them to get an accurate, current picture of their local air quality. Confused government jurisdiction over air quality is also a major problem, and has greatly inhibited efforts to address issues such as Canada's smog problem. The recommendations for changes to CEPA described below can, if implemented, begin to address these failings. However, they must be accompanied by a commitment on the part of the federal government to take greater responsibility for Canada's air quality.

While Pollution Probe has an active interest in all aspects of air pollution, the organization has for several years been focussing its attention and resources on solutions to Canada's smog problem. There is broad consensus among Canadian researchers and policy makers that smog is a chronic threat to health and environment, which has shown no sign of improvement in recent years. Accordingly, a number of the recommendations which follow are focussed on reducing smog.

3.0 CONTROLLING URBAN SMOG BY CONTROLLING TRANSPORTATION SOURCES

Millions of Canadians are exposed every summer to episodes of smog which are considered "unacceptable" by the Federal Department of Health. During such episodes,

ground-level ozone, the most problematic component of smog, exceeds 82ppb on an hourly average. Ground-level ozone is known to cause both health and environmental problems, including acute and chronic respiratory ailments in humans.[6] A number of studies have demonstrated that in southern Ontario, hospital admissions for respiratory problems rise significantly on smoggy days.[7] Crops and other vegetation are also sensitive to elevated levels of ozone, and crop damage estimates are as high as $70 million per year in southern Ontario.[8]

The transportation sector contributes roughly half of the total Canadian emissions which produce ground-level ozone. Research is increasingly showing that emissions from mobile sources have, if anything, been underestimated in the past.[9] If smog is to be effectively controlled, transportation emissions must be addressed in more innovative and effective ways, and the federal government has an important role to play in this regard.

The federal government has jurisdiction in two key areas pertaining to transportation emissions; fuel content and emission standards for new vehicles. While fuel content is regulated under CEPA, vehicle emission standards can currently be established through the Motor Vehicle Safety Act. Pollution Probe is recommending legislative changes in both areas; changes which we believe will allow for more effective control of urban smog.

Fuel Content:
Fuel formulation has a significant impact on vehicle emissions, including emissions of nitrogen oxides, volatile organic compounds, carbon monoxide and a range of toxics. Cleaner fuels represent an appealing mechanism to control vehicle emissions, and have been much in the news. Alternative fuels such as natural gas, propane and ethanol will undoubtedly increase in popularity and contribute to lower vehicle emissions in future years, but most indications are that gasoline will remain a dominant automotive fuel. Consequently, it is all the more important that the formulation of gasoline be as "clean" as possible.

In the United States, the 1990 amendments to the Clean Air Act included the mandatory introduction of reformulated gasoline to regions with severe air pollution problems. Other regions in the U.S. can also opt to introduce reformulated gasoline. This measure is expected to reduce volatile organic compounds and toxic compounds by 15% by 1995, and by 25% by the year 2000, and is considered to be one of the most effective aspects of the U.S. Clean Air Act.[10]

Pollution Probe is recommending that the federal government take leadership in the introduction of reformulated gasoline, as well as diesel fuel across Canada. CEPA already provides the federal government with most of the necessary powers, and at least two provinces, British Columbia and Ontario, are asking the federal government to take leadership in this area.[11],[12] Under section 47 of CEPA, the Governor in Council can make regulations governing the concentration or quantity of fuel elements, components and additives which "result in a significant contribution to air pollution". Any fuel

containing an excess of these substances cannot be produced in, or imported into Canada (s.46). The phase-out of lead was regulated under sections 46 and 47 of CEPA.

Two minor amendments to Section 47 of CEPA would help to clarify federal jurisdiction over fuel content;

1. **The Act should recognize that fuels can contribute to air pollution not only upon combustion, but also through evaporation. Evaporative losses during fuel distribution was responsible for an estimated 6% of all volatile organic compound emissions in Canada in 1985.[13]**

2. **The Act should be clearer about the definition of "significant contribution to air pollution", to ensure that the Federal government has adequate authority to protect air quality.**

Pollution Probe suggests the following illustrative wording changes to achieve the needed clarification; (changes are underlined)

Section 47:

The Governor in Council may, for the purposes of section 46, make regulations

(a) prescribing, with respect to any fuel or fuel used for any purpose, the concentration or quantity of any element.....would, through evaporation or combustion of the fuel in ordinary circumstances, result in a demonstrable contribution to air pollution

(b) prescribing, with respect to any fuel or fuel used for any purpose, any physical property of the fuel.....would, through evaporation or combustion of the fuel in ordinary circumstances, result in a demonstrable contribution to air pollution

,,,,,,,,,,,,,,,,,,

New Vehicle Emission Standards:

New vehicle emission standards are not currently addressed by CEPA. Instead, Transport Canada has powers to set new vehicle emission standards under the Motor Vehicle Safety Act. In practice, however, the federal government's guidance over new vehicle emissions takes the form of a voluntary Memorandum of Understanding with car manufacturers. Under the MOU, car manufacturers agree that U.S. federal emission controls for 1994 and 1995 model years apply to Canadian light-duty vehicles.[14] This

MOU expires in 1996, but may be extended.[15]

Because vehicles contribute so significantly to Canada's smog problem, Pollution Probe is recommending that Canada fall in line with a number of U.S. states and British Columbia, which have either adopted or are planning to adopt the California Low Emission Vehicle program. To date, Maine, Maryland, Massachusetts, New Jersey and New York have already adopted the California emission standards by regulation or legislation,[16] and negotiations are currently underway for a much broader adoption. Studies project that by the year 2015, the California standards can result in emissions of NOx, VOC, benzene, 1,3 butadiene and formaldehyde which are between 20% and 60% lower than what would be permitted under the U.S. federal standards.[17]

The cost-effectiveness of the various components of the California Low Emission Vehicle Program has recently been estimated by the California Air Resources Board as being less than $1/lb, or $2,000/ton of emissions reduced.[18] This cost-effectiveness is in line with control measures recommended in Canada's 1990 NOx/VOC Management Plan; for example, the NOx/VOC Plan assigned a cost of $2,300/T to the 1994/95 light duty vehicle emission limits, already adopted voluntarily by car makers.[19] Of course, the cost effectiveness of the California standards will improve considerably as more jurisdictions adopt them. Already, California and the northeast states planning to opt in collectively represent approximately 50% of the North American car market.[20] A number of industry observers anticipate that California vehicle emission standards will catalyse a flurry of new technologies and new job markets.

Past experience shows that when Canada lags behind tighter standards in the U.S., much unnecessary air pollution is the result. For many years, Canadian vehicle emission standards lagged behind those in the United States. Until the end of 1988, when more stringent standards came into effect, new Canadian cars were allowed to emit up to 3.1 grams of NOx per mile, while cars in the U.S. had been required to meet a standard of 1 gram per mile since 1981.[21] The legacy of that lenient standard is still with us today, in the form of many thousands of pre-1988 vehicles driving on Canadian roads. The vehicle emission testing program in British Columbia (AirCare) has found that pre-1988 cars are dramatically more polluting as a class than newer cars. (The AirCare inspection network tests approximately one million vehicles per year, and the greatest number of failing vehicles are from the 1986 model year. The number of 1986 cars failing the test is greater than all of the failures for 1974 and older vehicles combined.[22])

Transfer of vehicle emission legislation from MVSA to CEPA:

Pollution Probe is also recommending that the legislative authority to control vehicle emissions be transferred from the Motor Vehicle Safety Act, which is administered by Transport Canada, to CEPA.

This recommendation is based on the following reasoning:

The need to link public accountability with legislative authority: The Canadian Council of Ministers of the Environment approved a national smog control strategy in late 1990, with a goal of resolving ground-level ozone problems in Canada by 2005. Environment Canada, as a co-signatory, is thus responsible (along with provincial environment departments) for the realization of this goal. Unfortunately, emissions from transportation sources -probably the largest contributing sector to ground-level ozone - are currently outside of the control of Environment Canada. While the Environment Minister is publicly accountable for Canada's air quality, he or she is not able to regulate vehicle emissions. Vehicle emissions are regulated by a federal department which did not sign the CCME NOx/VOC Management Plan, and which does not consider environmental protection as its central mandate. As a matter of policy, it would be wiser to link public accountability with legislative authority. Although federal departments are certainly expected to work cooperatively to further national goals, differing mandates and priorities can make this difficult in practice.

Vehicle emissions are an environmental issue: Since CEPA's overall purpose is the protection of the environment, it is a more appropriate piece of legislation to regulate vehicle emissions than the Motor Vehicle Safety Act, which is intended to address issues such as seat belts. The Canadian Environmental Protection Act spells out the duties of the Government of Canada: "In the Administration of this Act, the Government of Canada shall..... endeavour to protect the environment from the release of toxic substances." As well, the scientific expertise to monitor and evaluate the full range of environmental impacts associated with vehicle emissions resides with Environment Canada rather than with Transport Canada.

The U.S. certainly treats vehicle emissions as an environmental issue, and not as a vehicle safety issue. In the U.S., vehicle emissions are regulated under Part VII of the Clean Air Act, along with aircraft emission standards, fuel standards and clean-fuel vehicles. The Act is administered by the federal Environmental Protection Agency.

ENVIRONMENTAL DATA AND RESEARCH: (Section 7 of CEPA)

The Canadian Environmental Protection Act currently provides the Minister of Environment with the power - but not the obligation - to establish and operate environmental monitoring programs, and to publish information collected through such programs. Ambient air quality is a very basic environmental parameter. Most Canadians would probably expect that the quality of the air they breathe is adequately monitored, and that up-to-date air quality information is available to citizens. However, research carried out by Pollution Probe in 1992 revealed a number of significant inadequacies associated with Canadian air quality monitoring networks and with their reporting mechanisms - inadequacies which should be addressed through changes to CEPA.

The need to monitor in more population centres: Currently, both the federal government and provinces are involved in monitoring of ambient air quality; in some cases, the two jurisdictions cooperate in the maintanance of monitoring stations through the National Air Pollution Surveillance Program (NAPS). Environment Canada publishes an annual summary of NAPS, which covers air quality data from 54 cities across the country, and provides information on a number of air pollutants; sulphur dioxide, carbon monoxide, nitrogen dioxide, ozone, soiling index, suspended particulates, lead, sulphate and nitrate.[23] This may at first glance appear to be a comprehensive monitoring network, but Canadians who want information about their local air quality have a number of reasons to be concerned. Under NAPS, many hundreds of mid-sized and small communities in Canada are without any air quality monitoring, even though there are undoubtedly some commercial, industrial or transportation activities in those communities. As well, many of the 54 communities cited are monitored for just one or two parameters, resulting in a very patchy information base. For example, Peterborough (Ontario) is monitored only by a sulphur dioxide monitor. Again as an example, NAPS monitors sulphur dioxide in only five Alberta communities and three cities in British Columbia.[24]

The need to monitor a broader range of substances: Many air contaminants known to be associated with health concerns are not monitored at all under NAPS; for example, volatile organic compounds such as benzene, 1,3 butadiene and formaldehyde are not monitored, even though these toxins are associated with car exhaust, and may be elevated in areas of high traffic. Particulate matter smaller than 10 microns (the so-called inhaleable particulate fraction) is also not monitored under NAPS, even though it has been shown to be associated with significant health concerns.

Even when monitoring data for a specific parameter in a given city are provided, readers of the annual NAPS summary are urged to "exercise caution when making judgements with respect to overall air quality for a given area. The air quality for a city generally cannot be defined on the basis of the air quality measured at a single monitoring site." Since 35 of the 54 cities included in the survey have only a single monitoring site, the value of the program to Canadians concerned about their local air quality is open to question. It is important to note that ambient air quality monitoring stations provide a very different kind of information from that now being collected via the National Pollutant Release Inventory (NPRI). Ambient air quality is what humans and other species are exposed to on a day to day basis, and reflects not only large industrial releases, but also transportation sources, long-range transport of pollutants, natural sources and the effects of weather.

The need for better publication of information: NAPS summaries are generally published two years after data are collected. Unfortunately, the summaries contain no analysis of air quality trends over time, or regional trends, or any discussion of specific exceedances of national ambient objectives. Readers are left to decipher columns of encoded numbers, without the aid of line graphs or bar charts or any other analysis of

results. Environment Canada does from time to time produce an analysis of National Urban Air Quality Trends, but the most recent version, covering the years 1981-1990, remained unpublished in March of 1994. Pollution Probe was able to obtain a draft copy under the Access to Information Act. This document finds that while some air pollutants (notably lead, carbon monoxide and total suspended particulates) declined between 1981-1990, the annual mean for ground-level ozone has shown a significant increase over the same time period.[25] Clearly, this type of information is important in the development of provincial and regional environmental policy, and its publication should not be delayed for four years.

To address the described short-comings of the ambient air quality monitoring program, Pollution Probe is recommending that Section 7 of the Act be revised. The revisions should ensure

- **that Canadians are protected by an adequate ambient air quality monitoring network, capable of reflecting regional air quality concerns**

- **that ambient air quality data and analysis is made available to Canadians in a timely fashion**

Pollution Probe suggests the following illustrative wording to achieve the above aims: (changes underlined)

Section 7: Environmental Data and Research

The Minister shall

establish, operate and maintain a system of environmental quality monitoring stations, adequate to effectively monitor any significant point sources of pollution, or specific regional concerns

(b) collect, process, correlate and publish on a biannual basis data on environmental quality, including ambient air quality and surface water quality,.....

(new c) ensure that these published data are comprehensible to Canadians, and fairly describe specific local ambient conditions across Canada

(new d) ensure that these published data are available to Canadians, by distribution to representative media, provincial and municipal governments and environmental organizations.

FORMULATION OF OBJECTIVES, GUIDELINES AND CODES OF PRACTICE: (Sections 8 and 9 of CEPA)

The need for implementation of guidelines and codes of practice:

The Canadian Environmental Protection Act (Section 8) currently directs the Minister of Environment to formulate objectives, guidelines and codes of practice to protect the environment. The Minister of Health is similarly directed to formulate objectives, guidelines and codes of practice to protect human health (Section 9). While these sections of the Act have indeed resulted in the development of many objectives and guidelines, they have not produced much in the way of real environmental improvement. Guidelines for new industrial sources or processes are generally developed in consultation with other levels of government, under the auspices of the Canadian Council of Ministers of the Environment (CCME). Once published, the guidelines have no regulatory power unless they are translated into federal or provincial regulation. This is where the process has stalled in most instances, because provinces are under no obligation to adopt them. The CCME does not monitor whether its guidelines and codes of practice are actually implemented by member governments.[26]

The CCME NOx/VOC Management Plan is an example of a program which relies heavily on guidelines and codes of practice to bring about emission reductions. The plan calls for the development of 18 separate guidelines for new sources and also 27 initiatives to guide industrial retrofits and other remedial programs. The development of these guidelines is proving to be very time-consuming, but far more worrying is the fact that the guidelines may never be translated into action, and may never reduce any emissions. These guidelines rarely contain any recommended timelines or deadlines for implementation, making it even more difficult for watchdog agencies to draw attention to regulatory inaction.

The need to apply the pollution prevention concept to objectives, guidelines and codes of practice:

Numerous case studies, in Canada and elsewhere, have demonstrated the environmental, social and economic advantages of preventing pollution rather than cleaning up after the fact. Other submissions to the Standing Committee are elaborating on how the pollution prevention concept should be incorporated into CEPA, but certainly the principle should be explicitly encouraged in Sections 8 and 9.

The need for a comprehensive set of ambient air quality objectives:

National ambient air quality standards are important tools to protect human health and the environment. They should be used to set goals, to measure progress and as a basis for enforcement. Unfortunately, National Ambient Air Quality Objectives (NAAQO) have been established for only five common air pollutants: sulphur dioxide, suspended particulates, ozone, carbon monoxide and nitrogen dioxide, even though there are clearly

dozens, if not hundreds of contaminants contributing to air pollution.

For example, no NAAQO exists for inhaleable particulate matter (smaller than 10 microns) even though recent U.S. studies have implicated this pollutant in the death of 60,000 Americans annually.[27] Similarly, no NAAQO have been set for hydrogen sulphide (associated with pulp and paper plants) or hydrogen fluoride (associated with aluminum smelters), even though objectives were proposed for these contaminants years ago.[28] Ambient air quality objectives are also missing for lead, benzene, chlorinated benzenes, dioxins and furans and a host of other toxins.

The need for enforceable air quality standards:
Under current law, Canada's NAAQO are merely guidelines, rather than enforceable standards. Most Canadians would be surprised to learn that when National Ambient Air Quality Objectives are exceeded, (as is frequently the case for pollutants like ozone), there are no legal consequences. Such a passive regulatory approach would not be considered acceptable for drinking water. The air which Canadians breathe also needs adequate regulatory protection.

In contrast to Canada, the U.S. has adopted a regulatory framework (via the Clean Air Act) designed to ensure that National Ambient Air Quality Standards will be met across the country, within reasonable time-frames. Very briefly, each state is divided into areas which either meet the ambient standard for a given air pollutant ("attainment areas") or do not meet the standard ("non-attainment areas"). States must develop and carry out detailed "State Implementation Plans" for polluted areas to bring the air quality to the acceptable standards within a mandated timeline. Federal enforcement measures can include the withholding of highway funding to individual states.[29]

A separate U.S. law sets detailed guidelines to channel federal funds from gasoline taxes towards less polluting transportation modes. Called the Intermodal Surface Transportation and Efficiency Act (ISTEA), it requires state or municipal authorities to develop overall transportation plans (with extensive community input) before they can access federal funds. Proponents of new projects have to demonstrate to federal funders that their concepts are superior in reducing traffic congestion and smog. Of $119 billion in U.S. federal money available for transportation by 1997, as much as $58 billion can be set aside to promote public transit, bicycling and walking.[30]

The need for regular review of ambient air quality standards:
CEPA does not currently dictate any periodic review of its objectives, guidelines or codes of practice. With an ever-increasing knowledge base however, new information and new understanding should be reflected in Canadian standards. For example, the adequacy with which the current ozone objective of 82 ppb protects health and environment is now under dispute. Two recent studies have linked increased hospital admissions to ozone

levels in Southern Ontario. They find a linear relationship between ozone levels and hospital admissions, meaning that even on days when ozone levels are below the current "acceptable" level, hospital respiratory admissions are linked to ozone pollution. This linear relationship suggests that there may not be a "no damage" level for ozone. It certainly suggests that the current Canadian objective is too lenient.[31],[32]

Another example is the national objective for SO2, which was established 20 years ago. Since then, newer studies have found species such as white pine, spruce and some crop species to be very sensitive to SO2 levels much lower than the national objective. An internal government committee reviewing the SO2 obective in 1987 took these findings into account, but failed to recommend tightening the objective.[33]

Regular review (at five year intervals) of ambient air quality standards is mandated under the U.S. Clean Air Act. Public interest groups can and do sue the U.S. EPA in cases where this review fails to occur on time.[34]

The need for public participation in the development of ambient air quality standards:
Currently, a committee made up of federal and provincial government officials (FPAC committee) develops Canada's ambient air quality objectives, essentially without public input. The current review of the objective for ground-level ozone is a special case, in that multi-stakeholder advisory committees are reviewing health and vegetation impacts, and forwarding their recommendations to FPAC. This special case allowing public involvement should become the normal situation. Ambient air quality obectives are relevant to all Canadians, and should not be developed in a secret process.

To remedy the above concerns, Pollution Probe is recommending that Sections 8 and 9 of the Act be revised. CEPA should ensure that objectives, guidelines and codes of practice will be developed

-for all significant air contaminants
-with public participation
-with timelines or deadlines for achievement
-with some certainty of their being implemented
-with a periodic review process

Pollution Probe suggests the following illustrative wording to achieve the above aims: (changes underlined)

Formulation of Objectives, Guidelines and Codes of Practice

8.(1) For the purpose of carrying out the Minister's functions and duties related to the quality of the environment, the Minister shall formulate

(a) environmental quality objectives specifying goals, purposes and target completion dates towards which an environmental control effort is directed, including goals or purposes stated in quantitative or qualitative terms

(b) environmental quality guidelines specifying recommendations in quantitative or qualitative terms with target completion dates to support and maintain particular uses of the environment

(c) release guidelines recommending limits, including limits expressed as concentrations or quantities, with target completion dates, for the release of substances into the environment from works, undertakings or activities; and

(d) environmental codes of practice specifying procedures, practices, target completion dates and release limits for environmental control relating to works, undertakings.....

(new subsection 3) The objectives, guidelines and codes of practice referred to in subsection (1) shall

(a) be based on the pollution prevention principle

(b) be subject to regular review

(c) be developed in consultation with stakeholders

(new subsection 4) To ensure that the objectives, guidelines and codes of practice are implemented across Canada, the minister shall use one or more of the following mechanisms:

(a) establishing regulations under the Act

(b) employing economic instruments to encourage implementation of objectives, guidelines and codes of practice

(c) negotiating agreements with provinces and territories on strategies to ensure that ambient objectives are not exceeded

(d) negotiating agreements with provinces and territories to translate guidelines and codes of practice into provincial regulations

(e) supporting research and development activities to promote new production processes, new product formulations, and new waste treatment and emission control technologies

Section 9: (1) For the purpose of carrying out the functions and duties of the Minister of

Health related to preserving and improving public health under this Act, the Minister of Health shall formulate objectives, guidelines and codes of practice with respect to all air contaminants which are demonstrated to contribute to the creation of air pollution and also with respect to all other elements of the environment that may affect the life and health of the people of Canada.

(new subsection 2): The objectives, guidelines and codes of practice referred to in subsection(1) shall

(a) have specified target achievement dates

(b) be based on the precautionary principle

(c) be subject to regular review

(d) be developed in consultation with stakeholders, including governments of provinces and public interest groups

(New subsection 3): To ensure that the objectives, guidelines and codes of practice referred to in subsection(1) are achieved across Canada, the minister shall use one or more of the following mechanisms:

(a) establishing regulations under the Act

(b) employing economic instruments to encourage implementation of objectives, guidelines and codes of practice

(c) negotiating agreements with provinces and territories on strategies to ensure that ambient objectives are not exceeded

(d) negotiating agreements with provinces and territories to translate guidelines and codes of practice into provincial regulations

(e) supporting research and development activities to promote new production processes, new product formulations, and new waste treatment and emission control technologies

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BIODIVERSITY AND THE ECOSYSTEM APPROACH:

ISSUES FOR THE FIVE YEAR REVIEW OF THE *CANADIAN ENVIRONMENTAL PROTECTION ACT*

by

Arlene Kwasniak*
B.Sc., M.A., LL.B., LL.M.
for the
ENVIRONMENTAL LAW CENTRE (ALBERTA) SOCIETY

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* Arlene Kwasniak is grateful for background material prepared by Jenny Scott, researcher, Environmental Law Centre (Alberta) Society, and Donna Bigelow, researcher, Canadian Environmental Law Association.

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CEPA REVIEW, BIODIVERSITY AND THE ECOSYSTEM APPROACH

EXECUTIVE SUMMARY

In December 1993, the Canadian government ratified the 1992 United Nation's Convention on Biological Diversity (the "Biodiversity Convention"). By this act of ratification, the government of Canada made certain commitments and undertook responsibilities to the world community to conserve and restore biodiversity. Many of Canada's undertakings are relevant to the review of the Canadian Environmental Protection Act (CEPA) as they involve areas covered or addressed by CEPA.

This Paper explores how Canada through a revised CEPA can carry out some of its Biodiversity Convention undertakings, including by adopting an ecosystem approach. Part II sets forth the key undertakings particularly relevant to the CEPA review and categorizes them under three areas CEPA already addresses: research and monitoring, national leadership and regulation of toxic substances. Part II also discusses the federal Parliament's constitutional right to incorporate these undertakings into CEPA. Part III of the Paper examines each category of undertakings and first, shows how CEPA currently addresses or fails to address the category, second, discusses why and how CEPA could be revised to better meet the undertaking, and third, makes recommendations for legislative change, where appropriate. Part IV lists the Paper's numerous recommendations to carry out Biodiversity Convention undertakings through a revised CEPA.

Among others, the recommendations include:

- changing the preamble to ensure that CEPA's goals encompass biodiversity protection and adopting ecosystem approach when appropriate, and revising administrative duties to add the precautionary principle;

- adding a number of definitions to CEPA including, "biodiversity", "ecosystem", "biological integrity of ecosystems", and "ecosystem approach", and revising the definition of "environment" to specifically incorporate the notions of "ecosystem" and "biodiversity";

- introducing the notion of "jurisdictional entity" to enable federal agencies, in adopting the ecosystem approach, to enter into agreements, share research and monitoring, or form committees with all relevant entities which have an aspect of control over an ecosystem area;

- revising a number of sections to enable monitoring and research on how to brake declining biodiversity; and

- amending CEPA to enable CEPA assessment and regulation of serious threats to biodiversity from pesticides.

CEPA REVIEW, BIODIVERSITY AND THE ECOSYSTEM APPROACH

I. INTRODUCTION

A. "Biodiversity", "Ecosystems" and "Ecosystem Approach"

"Biodiversity" means the variety of life on earth. The term covers all animals, plants and microorganisms on land, in fresh water and marine environments. The term covers diversity among species, ecosystems and genetic matter and structures as well as the complex relationships among all living things on Earth.[1]

"Ecosystem" means a dynamic complex of plant, animal and micro-organism communities together with their nonliving environment, interacting as a functional unit.[2] Common ecosystems in Canada include various natural forest ecosystems, with their natural mix of tree species, prairies, various mountain ecosystems and marine ecosystems such as salt marshes, estuaries, coral reefs and fresh water wetlands.

"Ecosystem management" or "ecosystem approach" involves applying ecological principles to resource management and government decision-making to ensure the long term maintenance of ecosystem structures, functions and composition.[3] It involves, for example, paying attention to broad cumulative impacts on ecosystems in government decision-making, and not just local impacts. It involves managing pollutants and polluting activities for their effect on ecosystems, and not primarily for their effects on human health. It involves cooperation or joint management of ecosystem threats among all of the jurisdictions having authority over an ecosystem area.

B. Ecosystem Approach to Protect and Manage Declining Biodiversity

Ecosystems provide for an array of life sustaining processes including climate control, air filtration and oxygenation, soil creation, and waste and pollution disposal and assimilation. Life on earth depends on ecosystem processes functioning properly. However, processes characteristic of an ecosystem will not continue to function properly without maintenance of that ecosystem's biodiversity. For example, a virgin forest ecosystem will not properly function without the huge numbers of invertebrates, fungi, algae and bacteria that live in nature.[4]

Unfortunately, declining biodiversity is posing critical global environmental threats to ecosystem life sustaining processes including global warming[5], and acid rain.[6] If we as a society want these life sustaining processes to continue unimpaired, we must take all necessary steps to control and abate these threats and restore ecosystem integrity.

One way governments can move to control and abate threats to ecosystem integrity and declining biodiversity is by adopting ecosystem approaches to regulation. Although the form of the approach will vary depending upon the nature of the regulatory authority[7] whatever the form, regulating to avoid partial and cumulative impacts on ecosystems, moving from human health or human cantered standards to ecological integrity standards, establishing inter-jurisdictional ecosystem management, can only lead to better preservation and restoration of biodiversity inherent in unimpaired ecosystems.

C. Canadian Environmental Protection Act Review and the United Nation's Convention on Biological Diversity

In Environment Canada's words, the Canadian Environmental Protection Act[8] ("CEPA") review process offers an opportunity to "review its policy and legislative framework in light of the challenges of the 1990s an beyond."[9] One significant challenge facing Canada is how to protect and restore declining biodiversity. This challenge derives not only from the fact of declining biodiversity in Canada, but also out of Canada's international obligations.

In December 1993, the Canadian government ratified the 1992 United Nation's Convention on Biological Diversity (the "Biodiversity Convention"). By this act of ratification, the government of Canada made certain commitments and undertook responsibilities to the world community to conserve and restore biodiversity. Many of Canada's undertakings are relevant to the CEPA review process as they involve areas or activities covered or addressed by CEPA.

The balance of this position paper explores how Canada can carry out some of its undertakings under the Biodiversity Convention through a revised CEPA. Part II sets forth Canada's key international Biodiversity Convention obligations particularly relevant to CEPA review. The Part categorizes these obligations into three areas CEPA already addresses: research and monitoring, national leadership, and regulation of toxins. The Part also considers a preliminary issue dealing with the constitution of Canada.[10] The issue involves the extent to which Canada has constitutional authority to carry out obligations under these three categories encipher as they relate to protecting biodiversity and adopting an ecosystem approach. Part III examines each category of Canada's Biodiversity Convention obligations and first, shows how CEPA currently addresses or fails to address this category of obligation, second, discusses why and how CEPA could

be revised to better meet the obligations, and third, makes recommendations for legislative change, where appropriate. Part IV lists all recommendations.

Although relevant to biodiversity protection, this paper will not address biotechnology, ocean dumping, or nutrients, as other Position Papers focus on these areas.

II. BIODIVERSITY CONVENTION OBLIGATIONS AND CEPA FRAMEWORK

A. CEPA and International Obligations

CEPA is no stranger to international obligations. CEPA's preamble states "AND WHEREAS Canada must be able to fulfil its international obligations in respect of the environment...". Three of CEPA's nine parts provide legislative authority to implement Canada's international obligations and agreements. As well, a number of CEPA's parts are already used to carry out Canada's international obligations.[11] Clearly CEPA can be used to carry out international obligations. The issue is: to what extent can CEPA be used to carry out international obligations under the Biodiversity Convention?[12]

B. Key Undertakings From the Biodiversity Convention

Key undertakings of Canada under the Biodiversity Convention relevant to CEPA Review include to:

(i) identify the components of biological diversity and to monitor the components [art.7(a)].

(ii) identify processes and categories of activities which are likely to have a significant adverse impact on biodiversity and to monitor these effects [art.7(c)].

(iii) develop national strategies, plans or programs for the conservation and sustainable use of biodiversity and to adapt existing strategies, plans and programs to this end [art. 6(a)].

(iv) integrate consideration of conservation and sustainable use of biological resources into national decision making and to adopt measures to avoid or minimize adverse impacts on biological diversity [art. 10(a)].

(v) encourage cooperation between Canada's governmental authorities and its private sector in developing methods for sustainable use of biological diversity [art. 10(e)]

(vi) adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity [art. 10(b)].

(vii) develop or maintain necessary legislation or other regulatory provisions for the protection of threatened species and populations [art. 8(k)]

(viii) where a significant adverse effect on biological diversity has been determined regulate or manage the relevant processes and activities [art. 6(a)].

C. Categorizing the Key Undertakings From the Biodiversity Convention

For the purpose of analyzing these undertakings in the CEPA Review it is useful to group them into areas CEPA already addresses. The first category is research and monitoring, which would include Biodiversity Convention undertakings (i) and (ii) above. Provisions in Part I of CEPA authorize the Minister to conduct a number of activities involving environmental or health related monitoring, research and publication. Part III of this paper considers expanding these sections to incorporate Biodiversity Convention undertakings in the research and monitoring category.

The second category is national leadership, including national approaches, guidelines, policies, harmonization and agreements, which would include Biodiversity Convention undertakings (iii), (iv), (v) and (vi), encipher as these do not require direct federal regulation of activities or processes. Various provisions of CEPA address this broad sense of national leadership for environmental protection, including the Preamble to CEPA, and provisions in Part I. Part III of this paper considers expanding these provisions to incorporate Biodiversity Convention undertakings in the national leadership category.

The third category is actual regulation as undertaken by Canada in (vi) (where adopting measures relating to the use of biological resources to avoid or minimize adverse impacts involves actual regulation), (vii) and (viii). Part I of CEPA authorizes federal assessment of substances and the regulation of toxic substances. Part III of this paper considers expanding these provisions to incorporate Biodiversity Convention undertakings in the regulation category.

D. Federal Constitutional Right or Authority to Incorporate Biodiversity Convention Undertakings

1. Constitutional Preliminary Issue

Preliminary to a discussion on incorporating Biodiversity Convention undertakings into

CEPA, it is necessary to briefly discuss potential constitutional limitations on federal authority. This section considers to what extent CEPA constitutionally can incorporate Biodiversity Convention undertakings from each of the three categories, research and monitoring, national leadership, and regulation of toxins. The discussion in this section is concise as another Position Paper addresses in depth CEPA and constitutional limitations.

2. Category One: Research and Monitoring

Jurisdictional environmental conflicts arise only where the constitution is not clear on whether the federal Parliament or a provincial Legislature has the right to *regulate* an area or aspect of environment. Typically, research or monitoring will not involve actual regulation of activities or resource use. Accordingly, incorporating undertakings (i) and (ii) should not raise constitutional issues.

3. National Leadership

As well, national leadership, including national approaches, guidelines, policies, harmonization, agreements and incentives, should not infringe on Constitutional provincial jurisdiction unless taking national leadership involves actual regulation of activities or resource use. Typically, showing a strong leadership example will not involve regulation. Indeed harmonization -- a national leadership approach -- is intended to resolve actual or potential constitutional jurisdictional conflicts and to provide for mutual adjustment when provincial and federal jurisdictions overlap.

4. Actual Regulation

Does federal Parliament have constitutional authority to regulate toxic substances for their effect on biodiversity? Section 34 gives Cabinet the right to regulate "toxic substances" which, by section 11, include quantities or concentrations of substances which have or may have an immediate or long term harmful effect on the environment. Section 3(1) of CEPA defines "environment" to mean

> the components of the Earth and includes:
>
> (a) air, land and water
> (b) all layers of the atmosphere
> (c) all organic and inorganic matter and living organisms, and
> (d) the interacting natural systems that include components referred to in paragraphs (a) to (c).

Subsection (d) of this definition arguably encompasses the notion of "ecosystems".

Already having captured the notion of "ecosystem" it is arguable that the definition, in effect, captures the notion of "biodiversity" meaning the variability among living organisms from all sources and ecosystems. One might then be tempted to conclude that since CEPA's definition of "environment" already includes the notions of ecosystem and biodiversity, it must be constitutionally acceptable for CEPA to regulate toxic substances for their effect on ecosystems and related biodiversity.

As enticing as this argument appears, ongoing litigation challenges its appeal. In *A.G. Can. v. Hydro-Quebec*[13] Trottier J., for the Quebec Superior Court, declared an article of an order on PCB's made under section 35 of CEPA to be *ultra vires* federal Parliament on the grounds that the PCB spill occurred within Quebec only and had no extra - provincial effects. Trottier J. based his decision on CEPA's definition of "environment" and "toxic". He noted that a toxic substance is one which can penetrate in a way so as to have a harmful effect on the "environment", including ecosystems and their components, or have a harmful effect on human health. He found that the PCB order went beyond considerations of public health and in fact included protection of the environment as a whole from the danger of toxic chemicals. Trottier held that the order impinged on provincial jurisdiction encipher as it applied to spills having non-public health environmental effects, occurring within the boundaries of a province and having no effects beyond that province.

In challenging CEPA's right to regulate toxins to protect the environment for reasons other than protection of human health, the case challenges the constitutional validity of CEPA's regulating toxins for their harmful effects on ecosystems and related biological diversity, at least when those effects do not extend beyond a province's boundaries. A commenter[14] on the case has argued that Trottier J. was wrong in concluding that CEPA's jurisdiction is so limited. The commenter maintains that Trottier J. reached his conclusion on an erroneous construal of the "national interest" doctrine enunciated by LeDain, J. in the well known *Crown Zellerbach* decision.[15] In that case LeDain J. held that in order for a subject matter to qualify under the "national interest" test it must have a "singleness, distinctiveness and indivisibility that clearly distinguishes it from matters of provincial concern and a scale of impact on provincial jurisdiction which is reconcilable with the fundamental distribution of legislative power under the constitution.[16] In *A.G. Can. v. Hydro-Quebec*, in Trottier's J. opinion, the PCB order had an impact on provincial powers incompatible with the fundamental distribution of powers in the constitution. He felt that the matter did not pass the "national interest" test on the grounds that a province can adequately regulate the non-health environmental effects of toxins which do not extend beyond that provinces border.

The commenter argues that Trottier J.failed to consider what "would be the effect on extra-provincial interests of a provincial failure to deal effectively with or control of the interprovincial aspects of the matter". He maintains that a provincial failure to

adequately deal with environmental contamination by toxic substances could have catastrophic effects both within and beyond the borders of a province. Toxic substances by their very nature do not breakdown and when spilled can contaminate groundwater streams, rivers and eventually be carried across provincial boundaries.[17] As well he notes that these non-health environmental effects only fall under CEPA regulation where they are caused by a toxic substance, which in and of themselves take on a national dimension, despite the fact that some spills might have no extra provincial effect. Regulation of toxins might well be justified under parliament's constitutional criminal law power since protection of the environment - including non-health effects - constitutes a legitimate public objective.

A.G. Can. v. Hydro-Quebec has been appealed to the Quebec Court of Appeal. Given the significance of its challenge to constitutional authority, the Quebec Court of Appeal's decision, no matter which way it goes, might well be appealed to the Supreme Court of Canada. Until the final appeal is heard, there will be some uncertainty over the legitimacy of CEPA's authorizing regulation of the effects of toxic substances where those effects remain entirely within a province's border and are not directly related to human health.

Notwithstanding this uncertainty, in view of the number of arguments that can be made in favour of the validity of the CEPA's regulating toxins for environmental effects, and because human health depends on the maintenance of ecosystems and related biodiversity, (which should in itself constitutionally justify such CEPA regulation), this paper will proceed on the basis that CEPA's regulation of non-health environmental effects of toxic substances is constitutionally valid.

III. REVISING CEPA TO INCORPORATE BIODIVERSITY CONVENTION UNDERTAKINGS

A. Category One: Research and Monitoring

1. CEPA's Current Provisions

Part I of CEPA authorizes the Minister of the Environment to conduct a number of activities relating to monitoring, research and publication. None of these activities specifically mention biodiversity or ecosystem approach.

2. Discussion on Revising CEPA and Recommendations

Toxic substances pose serious threats to the conservation of biological diversity.[18] These threats range from immediate lethal effects through to the disruption of endocrine systems of animals. Particularly threatening to biodiversity are the persistent, bioaccumulative, organohalogen compounds that include some pesticides (fungicides, herbicides, and insecticides) and industrial chemicals, other synthetic products, and some metals.[19] Traditional methods for controlling toxic substances have failed to address the long-term effects of these substances on biological diversity. The CEPA Review offers an ideal opportunity for Canada to carry out its undertakings pursuant to the Biodiversity Convention to carry out a number of its obligations in category one to identify the components of biological diversity and to monitor the components, and to identify processes and categories of activities which are likely to have a significant adverse impact on biodiversity and to monitor these effects. To enable Canada to carry out these, and other undertakings, first, CEPA must be revised to define key concepts and second, amended to ensure that CEPA authorizes research and monitoring relevant to the Biodiversity Convention. Specific wording changes in our recommendations below are in italics.

Recommendation #1

To ensure that CEPA's definition of "environment" explicitly captures the ideas of "biodiversity" and "ecosystem" we recommend deleting 2(d) under the definition of "environment" and substituting

(d) ecosystems including associated biological diversity

Recommendation # 2

The definition section of CEPA should be amended to add the following definition:

> *"ecosystem approach" means administrating this Act in a manner to achieve greater compatibility with, and to account, restore, protect and maintain the chemical, physical and biological integrity of ecosystems.*[20]

Recommendation #3

The definition section of CEPA should be amended to add the definition for the following:

> "biological integrity of ecosystems", "biodiversity" and "ecosystems" (using definitions from the Biodiversity Convention for the latter two).[21]

Recommendation #4

CEPA should be amended to add to Section 7(d), which authorizes research and studies, the following subsection:

> *(iii) the components of biodiversity, and the processes and categories of activities which are likely to have a significant effect on biodiversity*

Recommendation #5

CEPA should be amended to add to Section 7(e), which authorizes monitoring, research and publication, the following italicized words:

> (e) formulate comprehensive plans and designs, *including taking an ecosystem approach*, for the *prevention*, control and abatement of environmental pollution *including plans and designs to protect, restore and maintain the biological integrity of ecosystems and to protect, restore and maintain biodiversity* [rest same as is]

B. Category Two: National Leadership

1. CEPA's Current Provisions

Numerous sections of CEPA authorize the Minister to conduct activities to further national leadership in environmental protection. None of these activities specifically mention biodiversity or ecosystem approach. Amending the definition of "environment" to specifically refer to biodiversity and ecosystems, as suggested in the previous section of this study, will partially fill this gap. However, to better facilitate Canada's carrying out of undertakings from the Biodiversity Convention CEPA should be further amended.

2. Discussions on Revising CEPA and Recommendations

(i). Jurisdictional Entities

It is often said that ecosystems do not follow jurisdictional boundaries. The statement becomes glaringly true when "having jurisdiction over land" is broadly construed, as it realistically should be, to mean having the right to control some land uses either by law or by social consent. In this broader sense a number of entities have some degree of jurisdiction over land and accordingly some role to play in either supporting or thwarting the objectives of ecosystem management. In Canada, these entities include municipalities, provincial and federal government's and their subdivisions, public and private corporations, communal organizations, aboriginal groups, communities, private property owners and holders of private interests in property (such as oil and gas interests, grazing leases, timber rights and so on).[22] Without the cooperation and shared objectives of all, or at least a sufficient number of the entities that have jurisdiction over an ecosystem area, ecosystem management will not fully succeed.

Although numerous sections of CEPA authorize agreements, undertakings, programs and activities between federal agencies and provincial governments or agencies and other persons to further CEPA objectives, it is not clear that these entities include all of the kinds of entities which may have control over an ecosystem area. Accordingly, to ensure that CEPA amply authorizes the required arrangements for the ecosystem approach we recommend that CEPA be amended to include the following definition:

Recommendation #6

The definition section of CEPA should be amended to add the definition for the following:

*"**jurisdictional entity**" means having a right to control some environment uses either by*

law or by social consent, including municipalities and other local authorities, provincial and federal government and their subdivisions public and private corporations, communal organizations, aboriginal groups, communities, private property owners and holders of private interests in property

(ii). Preamble

CEPA's preamble currently specifically refers to what Canada should do to demonstrate national unity. However, the preamble does not incorporate the ideas of "ecosystem", "biodiversity" or "ecosystem approach", nor the idea of "jurisdictional entity" to more fully enable it to be a national leader in respect of curbing declining biodiversity. If the CEPA definition of "environment" is amended as recommended in Part III (A) 3 above, part of this absence will be remedied since each occurrence of "environment" in the preamble will incorporate the concepts of "ecosystem" and "biodiversity". We further recommend the following specific changes to the Preamble.

Recommendation #7

We recommend the following changes be made to the Preamble:

> Whereas the Government of Canada in demonstrating national leadership should *work with other jurisdictional entities, including other governments and Canadian citizens* to establish national environmental quality objectives, *ecosystem approaches, objectives and indicators*, guidelines and codes of practice.

(iii). Administrative Duties - Precautionary Principle

Section 2 of CEPA sets out CEPA objectives partly through listing the duties of Canada in administrating the Act. Nothing in section 2 specifically refers to ecosystems or biodiversity. If CEPA's definition of "environment" is amended as recommended in Part III (a) (3) of this paper, Canada should be thereby given the basis for administrating for biodiversity protection and for adopting an ecosystem approach where appropriate.

However, nothing in this administrative duties section requires Canada to adopt the precautionary principle. This principle would require Canada to make an appropriate environmental protection response even where there is no scientific certainty. We recommend that this administrative duty be added to better ensure protection of declining biodiversity in the face of scientific uncertainty.

Recommendation #8

We recommend that section 2(a) be amended to add the following italicized words:

(a) take both preventative and remedial measures in protecting the environment *fully recognizing the precautionary principle*;

Recommendation #9

We recommend that the section 3 Definitions be amended to add:

"Precautionary Principle" means that where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for failing to implement appropriate environmental measures.

(iv). Formulation of Objectives, Guidelines and Codes of Practice

Nothing in section 8 specifically refers to ecosystems, biodiversity or ecosystem approach. Although amending the definition of "environment" will somewhat remedy this situation, specific wording should be added to authorize and require ecosystem approach, where appropriate.

Recommendation #10

We recommend the following be added to section 8:

s.8(2)(a) environmental quality objectives *and ecosystem objectives* [same as is]

s.8(2)(e) formulate and release guidelines for adopting an ecosystem approach including to protect, restore and maintain the biological integrity of ecosystems and biodiversity

8(3)(a) consult with .... person interested *including any jurisdictional entity* [rest same as is].

(v). Federal-Provincial Advisory Committees

The sections of CEPA which authorize agreements, undertakings, programs and activities between federal agencies and other entities to further CEPA objectives be amended to add "jurisdictional entities" and incorporate ecosystem approach. For example the following italicized words should be added:

Recommendation #11

We recommend that the following italicized words be added to sections 6, 7, 8, 9 and 13:

- Section 6. **Federal-provincial advisory committees.** (1) For the purpose of establishing a framework for national action, taking cooperative action in matters affecting the environment, *developing, adopting and implementing an ecosystem approach* and for the purpose of avoiding conflict between, and duplication in federal and provincial regulatory activity, the Minister shall, in cooperation with the governments of the provinces, *and where applicable, other jurisdictional entities*, establish [delete "a federal provincial"] an *inter-jurisdictional* advisory committee to advise the Minister on

  (a) [as is]; and
  (b) other environmental matters that are of mutual interest to the federal and provincial governments *and other applicable jurisdictional entities* and pertain to this Act.

- Section 7(2)(a) in establishing a system of environmental quality stations, cooperate with the government of any province, *any jurisdictional entity,* [rest same as is]

- Section 7(2)(b): with the approval of the Governor in Council, enter agreements for the operation or maintenance of environmental quality monitoring stations ... government of any province, *any jurisdictional entity,* [rest same as is]

- 7(3): The Minister may ... act alone or in cooperation with any .... person, *including any jurisdictional entity* [rest same as is].

Similar additions should be made to sections 8(3), 9(2)(b) and 13(3).

C. Category Three: Actual Regulation

1. CEPA's Current Provisions on Identification of "Substances"

Currently CEPA, in its intended cradle to grave regulation of toxins, does not specifically refer to "biodiversity". Nor does CEPA authorize or adopt an ecosystem approach in any of the stages of this regulation. To see how CEPA could be improved to better enable Canada to meet its obligations under the Biodiversity Convention it is necessary to review

aspects of CEPA's regulatory process for toxins, beginning with identification of substances.

Section 25 of CEPA establishes a Domestic Substances List ("DSL") consisting of substances manufactured in, or imported into Canada on a commercial scale. Section 12 requires the establishment of a Priorities Substance List ("PSL"), which specifies DSL substances to which priority should be given in an assessment of "whether they are toxic or capable of becoming toxic". Section 25 also establishes a non-Domestic Substances list for substances new to Canada. Once on the PSL, or established to be a new substance, CEPA requires that the identified substances be assessed to determine whether they are "toxic" in accordance with the CEPA definition.

Section 11 of CEPA defines a substance as "toxic" if it is entering or may enter the environment in a quantity or concentration or under conditions

(a) having or that may have an immediate or long term harmful effect on the environment;
(b) constituting or that may constitute a danger to the environment on which human health depends; or
(c) constituting or that may constitute a danger in Canada to human life or health.

1A. Discussions on Revising CEPA Identification of Substance Provisions and Recommendations

As pointed out earlier in this paper the CEPA definition of "environment" arguably incorporates the notion of "ecosystem" and related notion of "biodiversity".[23] Accordingly, although the definition of "toxic" does not explicitly refer to biodiversity or ecosystems, by definition it could mean that a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that, among others, constitute or may constitute a danger to ecosystems or biodiversity. However, even if the definition of "toxic" is read in this way, it does not facilitate identification of toxins on the basis of effects on ecosystems or biodiversity.

The approach in the definition of "toxic" -- identifying substances, and then applying criteria for toxicity -- is known as the "substance by substance approach". The substance by substance approach works when potentially harmfully substances already can be identified.[24] However, this approach will not always identify harmful substances, or combinations of substances, when all that is known is that there is an undesirable ecosystem response, but it is not known what caused it. For example, with Ozone Depleting Substances British research initially identified an atmospheric problem, and subsequent research identified the substances responsible for the observed ozone

depletion. The research thus identified the ecosystem response and then worked backwards to identify which stressor or combination of stressors were responsible.[25] The concern with the substance-by-substance approach is that taking only that approach might miss substances that are causing particular problems in Canada which are only be identifiable through ecosystem responses.[26]

Adopting an ecosystem approach to substance identification would not only enable government to more thoroughly identify harmful substances. Adopting the approach would also compel government to focus on ecosystems in contrast to focussing primarily on human health. It would thus facilitate identifying substances which are potentially toxic, since they have or may have an "immediate or long term harmful effect on the environment" even though they might not have an immediate significant harmful effect on human health. This movement from an anthropocentric characterization of potentially toxic substances to a more ecocentric characterization is crucial if Canada is serious about carrying out its obligations under the Biodiversity Convention.

Recommendation #12

We recommend that CEPA be amended to enable an ecosystem response approach to identify potentially toxic substances, or groups or mixtures of substances.

2. CEPA's Current Provisions on Assessing Risk of Substances in Determining Toxicity

In deciding to designate a substance as toxic, CEPA requires that government determine whether the substance poses or may pose a significant risk to human health or environment. Currently CEPA provides no guidance for assessing risk to the environment.

2A. Discussions on Revising CEPA Assessing Risk of Substances in Determining Toxicity Provisions and Recommendations

The Biodiversity Convention requires Canada to regulate or manage processes or activities which may have a significant impact on biodiversity.[27] Canada could move towards meeting this goal by articulating ecosystem quality objectives, such as the maintenance of ecosystem integrity, to identify unacceptable risk to determine toxicity of substances.[28] Setting ecosystem objectives would enable regulating of toxins for their actual and potential adverse affects on ecological integrity and biodiversity.

Recommendation #13

We recommend that CEPA be amended to articulate ecosystem quality objectives, such as the maintenance of ecosystem integrity, to identify unacceptable risk to determine toxicity of substances.

3. CEPA's Current Provisions on Risk Management of Toxic Substances

After CEPA toxins have been identified through a risk assessment process (section 33), Cabinet can add substances to the List of Toxic Substances (TSL). Section 34 authorizes regulations to manage TSL substances. Although Cabinet's discretion in making regulations is broad, nothing in section 34 specifically authorizes regulations regarding a toxin's effect on ecosystems or biodiversity.

As well, section 34 offers no guidance for appropriate regulatory response to different types of toxic substances. Substances that can have a significant effect on biodiversity or human health (most likely those which are persistent and bioaccumulative) should require a more immediate, severe regulatory response than toxins without such significant impact.

3A. Discussions on Revising CEPA on Risk Management of Toxic Substances Provisions and Recommendations

Section 34 should be amended to facilitate Canada's meeting its obligations under the Biodiversity Convention to develop legislation to protect threatened species or populations, and to regulate or manage processes or activities which have a significant effect on biodiversity[29]. Section 34 should enable regulating for monitoring of the effects of toxins on ecosystems and to control ecosystem degradation and biodiversity decline from toxins. As well, section 34 should give enable immediate and serious regulatory response for persistent bioaccumulative toxins.

Recommendation #14

We recommend that section 34 be amended to (1) specifically authorize regulations for ecosystem monitoring of toxic substances as well as regulations to minimize or prevent ecosystem degradation and decline of biodiversity from use of toxic substances, and (2) enable immediate, serious regulatory response for persistent bioaccumulative toxic substances, or those which otherwise may have significant adverse impact on the environment or human health.

4. CEPA's Exemptions to Assessment or Regulation

Section 34(3) of CEPA prohibits Cabinet from regulating any aspect of a toxic substance that is regulated under any other Federal Act. Section 26(3) provides for an exemption to CEPA toxicity assessment for new substances where another federal statute provides for such assessment.

4A. Discussions on Revising CEPA Exemption to Assessment or Regulation Provisions and Recommendations

Pesticides are currently primarily regulated under the *Pests Control Products Act*[30] and the *Fertilizers Act*[31], both administered by the Minister of Agriculture and Agrifood Canada ("Agriculture"). Many ENGOs feel that pesticides should not be exempt from the assessment or regulatory provisions of CEPA.[32] Canada's obligations under the Biodiversity Convention instill new significance to the ENGO's views.

It is common knowledge that some pesticides and pesticide use threaten and reduce biodiversity.[33] Some of these threats to biodiversity are severe, for example, the effect of the pesticide carbo-furan in the prairie provinces on the burrowing owl, a species listed as threatened by the Committee on the Status of Endangered Wildlife in Canada.

Carbofuran is used where there are grasshopper outbreaks, generally in the prairies where it is hot and dry. It is also worked into the prairie soil to manage flea beetles at canola planting.[34] In higher doses carbofuran can be extremely toxic to mammals, including humans. However, even when normally applied in agriculture practices, carbofuran has a significant adverse effect on burrowing owls' reproductive success and acceptability of habitat. The current population of burrowing owls is estimated at only 2,026 pairs. According to the World Wildlife Fund (WWF) the effect of carbofuran might push the owl onto the endangered list.[35] Studies indicate that spraying within 50 meters of a nest reduced brood size by 17% and nesting success by 27%. Direct over-spraying reduced brood size by 83% and nesting success by 82%.[36]

WWF is not confident that Agriculture, in assessing carbofuran for regulation, will objectively assess its environmental risks. WWF expects that Agriculture will present the benefits of carbofuran in financial terms and will not fairly weigh them against the less easily quantifiable benefits of phasing out carbofuran, such as greater ecological sustainability and preservation of biodiversity.[37]

WWF's lack of confidence is understandable. An industry-regulating agency such as Agriculture inevitably is an advocate for what it regulates. This is to be expected and in most cases lauded. However, it is not laudable where an agency's legislated, political or simply adopted mandate requires it to advance the industry it regulates, while the agency

is also required to make decisions which could be contrary to that industry's interests. In being required to make the decision, the agency is put into a conflict of interest. However, this the same position Agriculture Canada is in when it is asked to consider banning carbo-furan in light of environmental risks, notwithstanding its benefits to the agriculture industry.[38] CEPA should not enable this conflict to persist, as it currently does with sections 34(3) and 26(3).

The Biodiversity Convention undertakings give even more reason for revising CEPA to enable CEPA assessment and regulation of pesticides. With the Biodiversity Convention, Canada undertook to develop or maintain necessary legislation or other regulatory provisions for the protection of threatened species and populations where a significant adverse effect on biological diversity has been determined, and to regulate or manage the relevant processes and activities.[39] According to WWF, such a threat currently exists with respect to carbofuran and the burrowing owl -- a threatened species. It is simply not realistic to expect Agriculture to carry out this obligation in view of perceived benefits of carbofuran, and other pesticides. If Canada is serious about its Biodiversity Convention undertakings, CEPA should apply to assessment and regulation of all substances having or that may have an immediate or long term harmful effect on the environment.

Recommendation #15

We recommend that in light of Canada's obligations under the Biodiversity Convention pesticides CEPA be amended to revise sections 26(3) and 34(3) so that pesticides be assessed under CEPA for toxicity and, if determined toxic, regulated under CEPA. We further recommend that appropriate interdepartmental arrangements be made to ensure effective participation of Agriculture Canada.

IV. SUMMARY OF RECOMMENDATIONS

Recommendation #1

To ensure that CEPA's definition of "environment" explicitly captures the ideas of "biodiversity" and "ecosystem" we recommend deleting 2(d) under the definition of "environment" and substituting

(d) ecosystems including associated biological diversity

Recommendation # 2

The definition section of CEPA should be amended to add the following definition:

"ecosystem approach" means administrating this Act in a manner to achieve greater compatibility with, and to account, restore, protect and maintain the chemical, physical and biological integrity of ecosystems.[40]

Recommendation #3

The definition section of CEPA should be amended to add the definition for the following:

"biological integrity of ecosystems", "biodiversity" and "ecosystems" (using definitions from the Biodiversity Convention for the latter two).

Recommendation #4

CEPA should be amended to add to Section 7(d), which authorizes research and studies, the following subsection:

(iii) the components of biodiversity, and the processes and categories of activities which are likely to have a significant effect on biodiversity

Recommendation #5

CEPA should be amended to add to Section 7(e), which authorizes monitoring, research and publication, the following italicized words:

(e) formulate comprehensive plans and designs, *including taking an ecosystem approach*, for the *prevention*, control and abatement of environmental pollution *including plans and designs to protect, restore and maintain the biological integrity of ecosystems and to protect, restore and maintain biodiversity* [rest same as is]

Recommendation #6

The definition section of CEPA should be amended to add the definition for the following:

*"**jurisdictional entity**" means having a right to control some environment uses either by law or by social consent, including municipalities and other local authorities, provincial and federal government and their subdivisions public and private corporations, communal organizations, aboriginal groups, communities, private property owners and holders of private interests in property*

Recommendation #7

We recommend the following changes be made to the Preamble:

Whereas the Government of Canada in demonstrating national leadership should *work with other jurisdictional entities, including other governments and Canadian citizens* to establish national environmental quality objectives, *ecosystem approaches, objectives and indicators*, guidelines and codes of practice.

Recommendation #8

We recommend that section 2(a) be amended to add the following italicized words:

(a) take both preventative and remedial measures in protecting the environment *fully recognizing the precautionary principle*;

Recommendation #9

We recommend that the section 3 Definitions be amended to add:

*"**Precautionary Principle**" means that where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for failing to implement appropriate environmental measures.*

Recommendation #10

We recommend the following be added to section 8:

s.8(2)(a) environmental quality objectives *and ecosystem objectives* [same as is]

s.8(2)(e) formulate and release guidelines for adopting an ecosystem approach including to protect, restore and maintain the biological integrity of ecosystems and biodiversity

8(3)(a) consult with .... person interested *including any jurisdictional entity* [rest same as is].

Recommendation #11

We recommend that the following italicized words be added to sections 6, 7, 8, 9 and 13:

- Section 6. **Federal-provincial advisory committees.** (1) For the purpose of establishing a framework for national action, taking cooperative action in matters affecting the environment, *developing, adopting and implementing an ecosystem approach* and for the purpose of avoiding conflict between, and duplication in, federal and provincial regulatory activity, the Minister shall, in cooperation with the governments of the provinces, *and where applicable, other jurisdictional entities*, establish [delete "a federal provincial"] an *inter-jurisdictional* advisory committee to advise the Minister on
  (a) [as is]; and
  (b) other environmental matters that are of mutual interest to the federal and provincial governments *and other applicable jurisdictional entities* and pertain to this Act.

- Section 7(2)(a) in establishing a system of environmental quality stations, cooperate with the government of any province, *any jurisdictional entity,*

[rest same as is]

- Section 7(2)(b): with the approval of the Governor in Council, enter agreements for the operation or maintenance of environmental quality monitoring stations ... government of any province, *any jurisdictional entity,* [rest same as is]

- 7(3): The Minister may ... act alone or in cooperation with any .... person, *including any jurisdictional entity* [rest same as is].

Similar additions should be made to sections 8(3), 9(2)(b) and 13(3).

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ENDNOTES

1. Federal-Provincial-Territorial Biodiversity Working Group, **Draft Canadian Biodiversity Strategy** (Hull: 1994) at 2.

2. Definition from the United Nations Convention on Biological Diversity, Annex 4 United Nations Convention on Environment and Development, June, 1992.

3. **Draft Canadian Biodiversity Strategy**, supra note 1, at 36.

4. Canadian Nature Federation, **Biodiversity: A guidebook for Canadian Corporations, Draft Report**, (Ottawa:1994) at 21-22 [hereinafter the CNF Draft].

5. The Federal-Provincial-Territorial Biodiversity Working Group. Draft Canadian Biodiversity Strategy: For Discussion, Biodiversity Convention Office: Hull, June 1994, p. 2.

6. CNF Draft, supra note 4 at 25.

7. For example, take regulation of timber resource management compared to regulation of air pollution. An ecosystem approach in the former might involve ensuring that a timber resource disposition contains mandates to maintain the integrity of the forest ecosystem through allowing only selective logging, requiring protection of watershed, preservation of wildlife habitat, leaving of dead trees and so on. An ecosystem approach in the latter might involve ambient standards (in addition to emission standards), regulating on the basis of effects of pollution on key ecological indicators, and so on.

8. Canadian Environmental Protection Act, R.S.C. 1985, c.16.

9. Environment Canada, CEPA Review Background paper, distributed at CEPA Review Workshop, November 22-24, Ottawa, at 2.

10. Constitution Act, 1867 (U.K.), 30 & 31 Vict., ch.3, as am.

11. Part II of CEPA in part implements the Basel Convention on the transboundary movement of hazardous waste. Part V in part enables implementation of international air

pollution obligations. Part VI implements parts of the 1972 London Dumping Convention which address some of the requirements of the United Nations Convention on the Law of the Sea. CEPA also contains general enabling provisions which fulfil some of Canada's procedural requirements at the international level. For example, CEPA provisions authorizing Canada's establishing air quality and emission inventories.

12. Canada has begun to address some of its Biodiversity Convention undertakings in the draft **Canadian Biodiversity Strategy** [Biodiversity Convention Office, Hull, 1994] a multistakeholder proposal recently released for comment and review. This draft strategy sets forth a number of goals for Canada to assist in meeting its international obligations towards biodiversity. However this strategy is just a beginning. If Canada actually were to attain the goals in the Strategy, it must seize every opportunity to move towards its international undertakings towards biodiversity. Goals from the Draft Biodiversity Strategy pertinent to CEPA Review include: that Canada maintain and develop as necessary legislation and other mechanisms to support the conservation of species and ecosystems at risk; regulate facilities to avoid significant negative impact to native biodiversity; promote conservation and only sustainable use of biodiversity; develop necessary policies and legislation to regulate the manufacture, transport and export of substances harmful to biodiversity, pursue harmonization or biodiversity-related legislation (See draft at 52-53); develop and implement ecological management approaches to conserve and sustainably use biodiversity (draft at 36). To the point, it must seize the many opportunities offered by CEPA Review.

For a detailed critique of the draft see A Response to the Canadian Biodiversity Strategy submitted to the Federal-Provincial-Territorial Biodiversity Working Group by the Canadian Institute of Environmental Law and Policy, available from the CIELAP office in Toronto.

13. A.G. Can. v. Hydro-Quebec [1992] R.J.O. 2159.

14. See Patrick Curley, Case Analysis of A.G. Can. v. Hydro-Quebec (forthcoming in the **Journal of Environmental Law and Policy**).

15. R. v. Crown Zellerbach Canada Ltd. [1988] 49 D.L.R. (4th) 161.

16. Id. at 184.

17. P. Curly, supra note 14 at 5.

18. Statement from the work session on Chemically Induced Alterations In Sexual Development: The Wildlife/Human Connection, Wingspread, Racine (Wisconsin: 1991).

19. Id. at 1.

20. In defining "ecosystem approach" we caution **not** to adopt the characterization of found in the Environment Canada, CEPA Review Background paper, distributed at the November, 1993, CEPA workshop in Ottawa, entitled Discussion Paper on the Review of the Canadian Environmental Protection Act and the Ecosystem Approach. That paper misrepresents the notion of "ecosystem" and "ecosystem approach" by incorporating all human activity into ecosystems and economic, human social and environmental functions into "ecosystem approach" (see for example, p. 27 of Discussion Paper). This approach inflates the notions of "ecosystems" and "ecosystem approach", and trivializes them so as to apply to practically anything. Perhaps the drafters of the that Discussion Paper confused "ecosystem approach" with "sustainable development", which does incorporate economic and social concepts. However, we point out that the use of "ecosystem" and "ecosystem approach" in that Discussion Paper is not standard. We recommend that CEPA adopt a definition such as we recommend; a definition that is not muddied by incorporating social relations and economics.

21. See Part I (A) of this paper. This paper does not offer a specific definition of "ecological integrity".

22. See L.K. Caldwell, Disharmony in the Great Lakes Basin -- Institutional Jurisdictions Frustrate the Ecosystem Approach in 20 **Alternatives** 3, at 26.

23. See discussion in Part II(D)4 of this paper. We later recommend that the CEPA definition of environment be explicitly amended to incorporate these notions. See Part III(A)3.

24. Resource Futures International Ottawa, Canada **Evaluation of the Canadian Environmental Protection Act, Final Report to Environment Canada** (Ottawa: 1993) at 30 [hereinafter **Consultants Report**].

25. Id.

26. Id.

27. See Part II(B) of this paper, especially undertakings (ii), (vi) and (vii).

28. This is recommended in the **Consultant's Report**, Id., at 39. For example, the Great Lakes Water Quality Agreement provides well defined objectives for "swimmable, fishable" and "drinkable" water. As well, the Canadian Council of Ministers of the Environment is developing a National Framework for Developing Indicators for Ecosystem Health incorporating ecosystem goals, objectives, indicators and targets.

29. See Part II(B) of this paper, undertakings (vii) and (viii).

30. Pest Control Products Act, R.S.C. c.P-10.

31. Fertilizers Act S.C. (1989) c..9

32. See **Consultants Report**, Appendix F at F-1.

33. The World Wildlife Fund position paper entitled Carbofuran: Pesticide Threatens Burrowing Owls and Other Prairie Wildlife (Toronto: March 1993) at 1 states that "chemically-intensive agriculture has negative implications for may wildlife species because it reduces habitat and species biodiversity, and causes direct and indirect contamination".

34. Id. at 2 and 3.

35. Id. at 5.

36. Id.

37. Id. at 11.

38. In its Position Paper (Id.) WWF contests the extent of these benefits, citing costs, overkill, ultimate soil degradation and losses due to biodiversity decline.

39. See Part II(B) of this paper, undertakings (vii) and (viii).

40. In defining "ecosystem approach" we caution **not** to adopt the characterization of found in the Environment Canada, CEPA Review Background paper, distributed at the November, 1993, CEPA workshop in Ottawa, entitled Discussion Paper on the Review of the Canadian Environmental Protection Act and the Ecosystem Approach. That paper misrepresents the notion of "ecosystem" and "ecosystem approach" by incorporating all human activity into ecosystems and economic, human social and environmental functions into "ecosystem approach" (see for example, p. 27 of Discussion Paper). This approach inflates the notions of "ecosystems" and "ecosystem approach" and trivializes them, and make them apply to practically anything. Perhaps the drafters of the that Discussion Paper confused "ecosystem approach" with "sustainable development", which does incorporate economic and social concerns. However, we point out that the use of "ecosystem" and "ecosystem approach" in that Discussion Paper is not standard. We recommend that CEPA adopt a definition that is not muddied by incorporating social relations and economics.

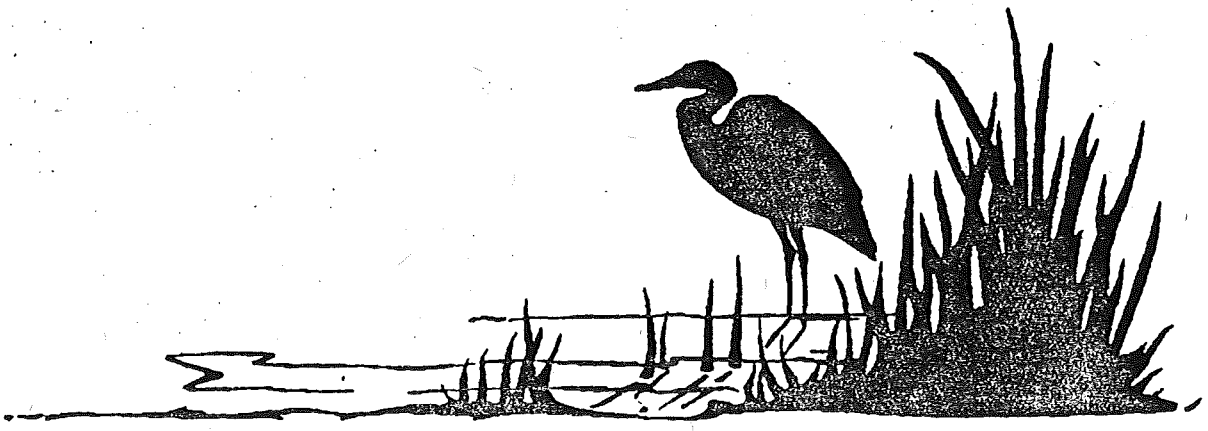
Appendix B

The Canadian Environmental Protection Act:
An Agenda for Reform

A Submission to the Standing Committee on
Environment and Sustainable Development
on behalf of listed groups

The Canadian Environmental Protection Act

An Agenda For Reform



A Submission to the Standing Committee on Environment and Sustainable Development on behalf of the non-governmental groups listed inside the front cover

November, 1994

The Canadian Environmental Protection Act: An Agenda For Reform

The following groups support the recommendations outlined in this report:

APT Environment Group
Banff Recycling Society
Cambridge Environmentalists
Canadian Environmental Law Association
Canadian Institute for Environmental Law and Policy
Canadian Labour Congress
Citizen Environment Alliance
Citizens' Network on Waste Management
Clean North
Clean Water Coalition
Conservation Council of New Brunswick
East Coast Environmental Law Association
Ecocity Society
Ecology Action Centre
Ecology Systems Information Society
Edmonton Friends of the North
Environmental Resource Center
Environmental Coalition of Prince Edward Island
Environmental Law Centre (Alberta)
Friends of Lily Lake
Friends of the Earth
Great Lakes United
Green Alternatives Institute of Alberta
Greenpeace
Groundwater Alert
Humber Environment Action Group
Learning Disabilities Association of Canada
Northern Air Quality Research Association
Nova Scotia Coalition for Alternative to Pesticides
Nova Scotia Environment and Development Coalition
Nova Scotia Public Interest Research Group
Ocean Voice International
Ontario Toxic Waste Research Coalition
Pembina Institute for Appropriate Development
Pesticide Action Group
Pollution Probe
Prince Edward Island Stranding Coalition
Recycling Organization Against Rubbish
Sierra Club of Canada
Société pour Vaincre la Pollution
St. Clair River International Citizens' Network
Stop and Tell Our Politicians Society
Sydney Tar Pond Clean-up Liaison Committee
Tatonka Foundation
Toronto Environmental Alliance
Toxics Watch Society of Alberta
Tusket River Environmental Protection Association
United Steelworkers of America
Voice of the Earth Society
West Coast Environmental Law Association
Western Canada Wilderness Committee (Alberta)
Windsor District Labour Council - Environment Committee
Women's Environmental Network/Ottawa

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The Canadian Environmental Protection Act: An Agenda For Reform

A Submission to the
Standing Committee on Environment and
Sustainable Development
on behalf of Non-governmental Groups
(listed inside the front cover)

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An Agenda For Reform

Introduction

The Canadian Environmental Protection Act (CEPA) is the most important federal environmental law. Since its very inception, environmentalists from across Canada have had major concerns about its effectiveness, the scope of its application, and its implementation.

In light of the Parliamentary Review by the Standing Committee on Environment and Sustainable Development, Canadians welcome the opportunity to have their views heard on the problems of CEPA, and how the law might be changed to improve the health of Canadians and their environment.

In mid-1994, members of the Toxics Caucus of the Canadian Environmental Network (CEN) decided to study CEPA in anticipation of the Parliamentary Review. Various members of the caucus developed background papers on numerous issues relevant to CEPA. These papers were released in a document titled Reforming the Canadian Environmental Protection Act. This document is a summary of positions on various CEPA issues endorsed by the non-governmental groups listed on the inside of the front cover.

This summary outlines some 14 issues related to CEPA. Each issue summary is indexed to the background papers in the document noted above. The detailed analysis is referenced in each section and should be consulted for further information.

Finally, while there are additional issues related to CEPA, the 14 issues summarized here are what we believe to be the most immediate and important.

Acknowledgements

The production of this submission would not have been made possible without the dedication of the following people: Donna Bigelow, Craig Boljkovac, Fé de Leon, Ronald Fournier, William Glenn, Janice Harvey, Burkhard Mausberg, Paul Muldoon, Mark Winfield and members of the Toxics Caucus Steering Committee of the Canadian Environmental Network (CEN).

Special thanks for the support of the Canadian Environmental Network, Canadian Environmental Law Association, Canadian Institute for Environmental Law and Policy, Environment Canada, the Laidlaw Foundation, and the Ontario Ministry of the Environment and Energy.

The interpretations, views and ideas expressed in this report represent the views of the signatories and not necessarily those of the CEN, its member groups, funding organizations, their trustees or officers.

An Agenda For Reform

Guiding Principles

While this analysis of CEPA is divided into 14 issues, there are two fundamental themes that pervade each issue and should provide the framework for the Parliamentary Review.

(1) The Need for Strong Federal Leadership

Why is the CEPA Parliamentary Review so important? The simple response is that the Review will provide an opportunity not only to evaluate CEPA, but also to assess the state of federal leadership in the protection of the Canadian environment. It is incumbent on the Committee to urge the federal government to affirm its interest in Canada's environment and ensure a minimum level of environmental quality for all Canadians.

(2) Precautionary Principle

The precautionary principle should be a guiding principle in the CEPA review. Principle 15 of the Rio Declaration defines the Precautionary Principle as follows:

> *Where there are threats of serious or irreversible damage, lack of full scientific certainly shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.*

In order to implement the precautionary principle, two key points should be considered during the CEPA review:

Onus of Proof: It is fundamentally important that Committee members ask who bears the onus of proof when examining any issue within CEPA. The precautionary principle would suggest that the party proposing an activity, which may cause harm to the environment or human health, should bear the onus to establish that the activity is safe rather than requiring the government establish that it is harmful.

Standard of Proof — Weight of Evidence: There is also the question of the standard of proof necessary before the federal government can act. Rather than acting only if there is absolute proof that something may harm the environment, regulatory action should be undertaken if the weight of evidence suggests that such action is appropriate.

1. The Federal Role

What CEPA says:

Although not specifically addressed in the statute, the question of the appropriate role of federal responsibility in protecting Canada's environment affects virtually every other issue relevant to CEPA. CEPA was designed and applied based on a federal interpretation of the scope of its constitutional powers over the environment.

A number of mechanisms in CEPA are intended to further federal-provincial cooperation in environmental management. These include equivalency agreements (where CEPA regulations would not apply if a province has already implemented "equivalent" provincial regulations); administrative agreements (where both the federal government and a province administer some CEPA provisions in partnership); and inter-governmental agreements (where administrative and enforcement duties are delegated to a province).

What's wrong with CEPA?

The federal government has traditionally taken a narrow interpretation of its potential constitutional authority in the field of environmental management in Canada. The problems inherent in this approach could be amplified in the "harmonization" initiative currently under way under the auspices of the Canadian Council of Ministers of the Environment (CCME).

In the absence of a strong federal role, the dynamics of the harmonization process among the provinces may lead to a "race for the bottom" and the adoption of "lowest common denominator" national standards. The capacity of the process to result in constraints on the ability of provinces to raise standards independently, and to adopt innovative policy approaches, are also major concerns.

Minimum standards of environmental quality must be achieved for all Canadians, while providing individual jurisdictions with the freedom to adopt more stringent standards if they wish to do so. This will require the federal government to demonstrate leadership in the environmental field. The federal government must affirm its interest in protecting Canada's environment, and make it clear that it will intervene to the full extent of its jurisdictional capacity when it feels such actions are necessary.

What needs to be changed?

In sum, the federal government must:

1.1 Affirm its commitment to be a leader in shaping appropriate environmental law and policy in Canada.

1.2 Establish minimum standards for environmental protection.

Source: The Constitution, Federal-Provincial Relations, Harmonization and CEPA. Prepared by the Canadian Institute for Environmental Law and Policy.

1. The Federal Role

The federal government's jurisdiction to most areas relevant to CEPA, and in particular, toxics, is well supported under the constitution.

1.3 To re-affirm its position, the Preamble of CEPA should be amended to state that the federal government should take a national leadership role in establishing national environmental quality objectives, guidelines, and standards.

While inter-governmental agreements are potentially a useful mechanism for facilitating federal-provincial cooperation, the process for their development and implementation must be improved.

1.4 The federal government's intention to negotiate an inter-governmental agreement should be made public with the opportunity given to the public to comment on draft agreements.

1.5 All agreements, once concluded, should:

(a) be published in Part II of the Canada Gazette;
(b) require annual reporting to Parliament;
(c) have sunset clauses requiring periodic review; and
(d) permit the federal government to retain the right to prosecute under federal statutes if an agreement exists.

2. Enforcement and Administration

What CEPA says:

Environment Canada, with the Department of Justice, has the authority and responsibility to enforce CEPA and its regulations. CEPA gives enforcement officers certain powers to carry out these duties. Eighty-six people carry out the investigation and enforcement duties related to CEPA across Canada.

Source: CEPA and Environmental Law Enforcement. Prepared by the Canadian Institute for Environmental Law and Policy.

What's wrong with CEPA?

On average, only ten prosecutions per year have been undertaken under CEPA, and 85% of these prosecutions are related to just three regulations. There are four main reasons for this poor enforcement record. First, there is a federal aversion to asserting its constitutional authority to protect the environment. Second, there is a reluctance by Environment Canada to "get tough" with polluters and act as a regulatory and enforcement body. Third, adequate resources are lacking to fully carry out its enforcement duties. Finally, inspection and enforcement officers have inadequate powers and authority to adequately fulfil their functions.

What needs to be changed?

There are five sets of recommendations necessary to improve the enforcement and administration of CEPA.

2.1 In the context of CEPA, Environment Canada's mandate must be:

(a) to provide timely information to regulated industries; and

(b) to actively enforce compliance with requirements of the legislation when it is necessary to do so.

2.2 The duties of Environment Canada with regard to its enforcement mandate must be clearly affirmed in CEPA. To realize this, the following structural reforms within the Department of Environment (DOE) are necessary:

(a) there should be a clear separation between the "promotion and assistance" role and the enforcement functions within Environment Canada;

(b) prosecutions should be undertaken by Environment Canada, without the need to obtain permission from the Department of Justice; and

(c) investigative and legal services staff should be given greater authority to decide when to prosecute.

2.3 Inspectors' powers under CEPA should be expanded to include at least:

(a) the authority to issue "cease and desist" orders;
(b) preventative orders; and
(c) authority to gain entry where an owner refuses consent.

2.4 CEPA should be amended to include a citizen suit to ensure that the requirements of the Act and any regulations are met (see ENVIRONMENTAL AND WORKER RIGHTS section).

2.5 CEPA should implement administrative penalties which is similar to the approach followed by the health and safety authority under the Worker's Compensation Board.

3. Environmental and Worker Rights

What CEPA says:

The role of the public in CEPA is carefully defined. There are a few rights to information, including a program called the National Pollutant Release Inventory (NPRI) which requires large facilities to report pollution emissions to the public.

CEPA also includes a number of provisions which give the public a right to review regulatory decisions, to request investigations, and to sue for damages caused by breaking the law. CEPA does not include specific worker rights with the exception of a limited right in Section 37 that offers certain protection to employees.

Source: Ensuring Meaningful Public and Worker Involvement in Environmental Protection under CEPA.
Prepared by the West Coast Environmental Law Association and the Canadian Labour Congress.

What's wrong with CEPA?

Currently, all Canadians, including industry, regulators, labour groups, environmental groups and the general public have limited access to both government and private sector information on pollutants being released into the environment.

Further, there are barriers to the civil actions and private prosecutions under CEPA. There are also problems with the ability of the public to request reviews of regulatory decisions, given the inadequacy of regulatory instruments.

Finally, worker rights are almost non-existent under CEPA. CEPA does not recognize the risk workers are exposed to, and the role they can play in improving environmental conditions.

What needs to be changed?

3.1 CEPA should improve public information rights. Measures which would facilitate this improvement should include the following:

3.1.1 A public information registry should be established under CEPA. CEPA should specify that the registry is to include an electronic component, publicly accessible on the Internet. The registry should collect information on the following:

(a) information gathered under the National Pollutant Release Inventory (NPRI);
(b) monitoring and inspection information;
(c) information on enforcement activities;
(d) information relevant to notification regulations;
(e) proposals for federal-provincial harmonization and equivalency agreements;
(f) proposals for new regulations, codes of practices, and guidelines; and
(g) pollution prevention plans.

3.1.2 Confidentiality provisions in CEPA should be reformed so they do not block meaningful public access to information.

3. Environmental and Worker Rights

3.1.3 The National Pollutant Release Inventory should be improved in CEPA, including:

(a) to provide the NPRI with a sound and broad legislative base in CEPA;
(b) to include information relevant to emergency planning;
(c) to collect information on chemical use and pollution prevention; and
(d) to broaden the scope of the program by reducing the thresholds to include more facilities and adding more substances to the NPRI list of substances.

3.2 CEPA should be amended to include a comprehensive set of environmental and worker rights, which can evolve into a CEPA environmental bill of rights.

3.2.1 The environmental rights that should be included are:

(a) a declaration of public trust over federal lands and natural resources over which the federal government has jurisdiction;
(b) a provision to allow citizen suits under CEPA and reform of the law relating to private prosecutions (see ENFORCEMENT AND ADMINISTRATION section);
(c) a provision to remove the barriers to civil causes of action for breaches of CEPA and its regulations;
(d) a right to request reviews of the adequacy of existing federal regulations to protect the environment; and
(e) a right to receive notices and provide comments on proposed decisions.

3.2.2 Worker rights should include:

(a) the right to a joint worker-management environment committee;
(b) the legal right to refuse to pollute;
(c) the right to environmental information from the employer;
(d) the right to whistle-blower protection;
(e) where a joint environmental committee is not appropriate, the joint health and safety committee should expand its jurisdiction to handle environmental issues;
(f) compensation must be available for workers who lose their jobs as a result of environmental issues;
(g) worker representatives must have the right to take part in environmental inspections and investigations, as they currently do with regards to occupational hazards; and
(h) the Federal Workplace Hazardous Materials Information (WHMIS) should be amended to require that Material Safety Data Sheets (MSDS) include information regarding environmental hazards and precautions for clean-up of spills and other environmental risks.

4. Economic Instruments

What CEPA says:

Economic instruments, such as environmental taxes and tradeable pollution permits, are those tools or measures which have the potential to alter behaviour by providing monetary incentives to reduce and or eliminate the creation and discharge of contaminants. Currently, there are no specific provisions in CEPA pertaining to economic instruments.

Source: CEPA and Economic Instruments. Prepared by the Canadian Institute for Environmental Law and Policy.

What's wrong with CEPA?

Economic instruments can be used to supplement, not replace traditional regulatory regimes. However, even within this framework, there are two preconditions essential to the use of economic instruments. First, a discharge monitoring system is required. This allows the firm and Environment Canada to measure pollution levels accurately. Second, clearly enforceable environmental quality standards must be established to serve as baselines for a minimum level of environmental quality that have to be met at all times.

What needs to be changed?

While there may be a potential federal role for a trading system regarding "non-toxic" air emissions, such a system would require unprecedented federal-provincial cooperation, as well as facing substantial administrative, monitoring and enforcement problems. The situation is even more difficult for "toxic" substances. Therefore:

4.1 CEPA should not be amended to permit trading of ocean dumping permits or emissions involving substances considered "toxic" under CEPA. This is due to concerns regarding the potential for the degradation of local environments, and due to the administration, monitoring and enforcement difficulties of implementing an environmentally acceptable trading system.

The imposition of discharge fees under CEPA may present a number of problems. However charges on the manufacture, use or processing of "toxic" chemicals can play a role in promoting pollution prevention through the reduction and elimination of the use and manufacture of toxic substances.

4.2 Section 34 of CEPA should be amended to permit imposition of charges on use, processing, manufacturing, sale, import, or export of a "toxic" substance or products containing a "toxic" substance.

4.3 Revenues raised from such charges should be employed to finance federal contributions to the National Contaminated Sites Rehabilitation Program. Revenues might also be used to support the development and diffusion of skills and technologies related to pollution prevention within Canada.

5. Toxic Substances & Pollution Prevention

What CEPA says:

Part II of CEPA establishes a process to assess and regulate toxic chemicals. Under this Part, all substances used or imported in Canada are put on the Domestic Substances List (DSL). From this list, a number of chemicals are selected for a full assessment and placed on the Priority Substances List (PSL). The assessment of a PSL chemical determines whether it is "toxic" as defined by CEPA. If found "toxic," the federal government is given extensive power to regulate that substance.

Source: Incorporating Pollution Prevention into Part II of CEPA: An Agenda for Reform. Prepared by the Canadian Environmental Law Association.

What's wrong with CEPA?

Part II has not been an effective mechanism to regulate toxic substances. In fact, CEPA has regulated few chemicals since its inception. It took five years to assess 44 PSL chemicals and even then, 12 of them could not be identified as "toxic" or "non-toxic" because of insufficient information. Moreover, CEPA does not recognize persistent, bioaccumulative substances as a special threat, and the definition of "toxicity" is unnecessarily onerous, making it a very difficult precondition for regulation. Finally, CEPA focuses on the pollution control approach, and not prevention, and continues to place the onus of proof to establish "toxicity" on the public, rather than the polluter.

What needs to be changed?

Part II of CEPA should undergo significant changes to ensure that the Act will protect human health and the environment, including:

5.1 There should be a Legislated Declaration of a National Policy of Canada that the use, generation and release of pollutants should be prevented. Further, there should be a commitment to virtually eliminate the use, generation and discharge of persistent toxic substances by 2004 and to reduce the use, generation and release of other toxic substances by 50% by the year 1999. An improved National Pollutant Release Inventory could be used to measure progress in this regard.

5.2 CEPA should formally adopt a pollution prevention approach that seeks to avoid the use and generation of toxic substances. The most stringent definition of this term should be used.

5.3 A Sunset Chemical Protocol should be adopted, designed to identify the hazardous characteristics of the substances of greatest concern (such as those that are persistent and bioaccumulative), and timetables developed to phase them out.

5. Toxic Substances & Pollution Prevention

5.4 CEPA should incorporate a chemical class approach to regulation rather than a substance-by-substance approach. Priority should be given to chlorine as the focus of this effort.

5.5 A review of the definition of toxicity is required, placing emphasis on understanding the inherent characteristics or properties of toxic chemicals. In cases where there is an information gap, the interest using or importing the substance must ensure that all the information necessary to make an assessment is available and that rather than waiting for absolute scientific proof, regulatory action should be taken based on the weight of evidence.

5.6 In addition to the Sunset Chemical Protocol, CEPA should incorporate programs to reduce the use and generation of toxic substances, including:

(a) pollution prevention programs, which will require facilities to develop plans for reductions and implement them;
(b) technical/financial programs;
(c) integration of pollution prevention in federal approvals and enforcement actions, institutional reforms, such as Pollution Prevention Institutes within universities; and
(d) various other toxic use reduction programs.

5.7 There should also be mechanisms to ensure that those affected in the movement to cleaner production processes, such as workers and communities, are protected in a fair way and that they have a legitimate role in decisions pertaining to the planning for transition to a non-toxic economy.

5.8 There should be provisions for financial compensation and other measures for workers who lose their jobs as a result of the "transition to a non-toxic economy."

6. New Chemical Substances

What CEPA says:

Part II of CEPA deals with toxic chemicals including those new to commercial use in Canada. Under Section 26, new chemicals must be screened before they can be imported or manufactured here. If they are considered "toxic," as defined under CEPA, then the Minister of Environment can impose any condition on their use, release or importation.

What's wrong with CEPA?

CEPA's screening of new chemicals depends on the definition of "toxic." This definition is very narrow and few new chemicals so far have been declared "toxic." As a result, they are often not regulated. Even if a chemical is declared "toxic," companies are not required to follow pollution prevention measures: a new "toxic" substance can still be released into the environment. This narrow definition poses a problem for a number of new chemicals that need to be addressed through the weight of evidence approach.

Chemical by-products, which often cause significant environmental concerns, are explicitly exempt from CEPA. Also, CEPA exempts new chemicals that are regulated by other departments and laws. Pesticides, for example, are screened in a different way than industrial chemicals.

Furthermore, the public has an extremely limited role in determining whether a new chemical is "toxic," or what management options should be employed for a "toxic" chemical.

Finally, CEPA may allow for a different level of assessment for chemicals intended for export, than those which are used in Canada. This double standard can result in potentially lower environmental standards in importing countries, as compared to standards in Canada.

What needs to be changed?

The pre-commercial screening of chemicals can be the ultimate preventative activity. Rather than waiting for chemicals to cause damage, they can be severely restricted or not allowed at all. Thus, CEPA should be amended, including:

6.1 The definition of "toxic" needs to be amended in CEPA to reflect the intrinsic characteristics of a toxic substance. Assessments of chemicals should be based on the weight of evidence.

Source: CEPA, Chemical New Substances, and Biotechnology. Prepared by the Canadian Institute for Environmental Law and Policy.

6. New Chemical Substances

6.2 The use or manufacturing of new chemicals which are persistent, bioaccumulative and toxic should not be permitted in Canada (the "sunrise" clause). These chemicals cause significant damage to human health and the environment.

6.3 New chemicals which are toxic, but not persistent or bioaccumulative, should only be allowed if their users develop pollution prevention plans acceptable to DOE to ensure no release to the occupational or general environment.

6.4 By-products should no longer be exempted from the CEPA screening process for new substances.

6.5 Other statutes regulating new substances must include the following provisions to ensure that all statutes regulating new substances are as stringent as CEPA and avoid being exempted under CEPA:

(a) assessment of toxicity;
(b) public participation; and
(c) prevention options for substances that are toxic or are suspected of toxicity.

6.6 The public participation provisions of CEPA need to be improved to allow Canadian citizens a role in decisions regarding new chemicals.

6.7 CEPA should be changed to ensure that new chemicals intended for export are assessed the same way as chemicals intended for domestic use. Substances prohibited in Canada should also be prohibited from export.

7. Ocean Dumping

What CEPA says:

Part VI of CEPA pertains to regulating the "deliberate disposal at sea from ships, aircrafts, platforms or other anthropogenic structures." Under these provisions, no person can dispose of any substance unless a federal permit has been issued and other certain exceptions have been met. Public notice must be given that a permit has been granted. The applicant may file a notice of objection if the permit is not issued, or is issued with unfavourable terms. The Act also contains powers with respect to inspections, recovery of costs, and search and seizure.

Sources: Ocean Dumping. Prepared by the West Coast Environmental Law Association.

What's wrong with CEPA?

Historically, government regulation has discriminated against oceans compared to fresh water environments. The collapse of commercial fisheries soundly discredits the popular view that oceans are infinite systems which can absorb all abuses. Still, Canada's approach to regulating ocean dumping ignores this reality.

Within the context of pollution prevention, CEPA does not mandate the reduction of wastes normally dumped in the ocean. Nor does CEPA prohibit the dumping of toxic chemicals (including radionuclides) or materials contaminated with these substances, in spite of the fact that once dumped they are effectively released into the marine environment with no realistic means of recovery or control, and there is no accounting for cumulative effects. Critical ecological zones (i.e., spawning grounds, benthic nutrient pumps, lobster grounds) are not explicitly protected. Ocean dumping permit fees do not reflect the cost of degrading the marine environment, effects monitoring, or enforcement. Public intervention in the permitting process is poorly accommodated.

What needs to be changed?

CEPA Part VI should be amended to ensure the maintenance of marine ecological functions (see COASTAL ZONE MANAGEMENT section) and to prevent pollution (see TOXIC SUBSTANCES AND POLLUTION PREVENTION section). Provisions would:

7.1 Prohibit dumping of any toxic substances or materials contaminated with toxic substances, including all radioactive wastes.

7.2 Require dumping permit applications to show there are no means of avoiding creation of the waste to be dumped.

7. Ocean Dumping

7.3 Require permit applications to show that ocean dumping of wastes is the best environmental option and will not pose a hazard to the environment.

7.4 Be linked to Part I (environmental quality objectives), Part II (toxics), Part III (nutrients), and a new Part pertaining to coastal zone pollution prevention (see COASTAL ZONE MANAGEMENT section).

7.5 Explicitly protect critical areas such as spawning grounds or habitat, benthic and other nutrient pumps, and fishing zones.

7.6 Increase ocean dumping fees consistent with the polluter pays principle and sufficient to cover costs of processing the application, public consultation, long term monitoring of effects, enforcement and remediation or retrieval if necessary.

7.7 Close definition loopholes to include disposal in intertidal zones, creation of artificial structures such as islands, reefs and dive sites, and the dismantling of such structures.

7.8 Provide for effective public participation in permitting process including the right to appeal a permit.

8. Coastal Zone Management

What CEPA says:

Coastal zone management (CZM) is an ecosystem-based approach to managing human activities at the land-sea interface (defined broadly to include the limits of Canada's Exclusive Economic Zone and inland watersheds) and accounts for all human and ecological interactions within that zone. Because Canada is bounded by three oceans, the coastal zone is significant economically, culturally and ecologically. Currently, there is no reference to or provision for CZM in CEPA. However, CEPA does deal with some CZM components through regulating toxic chemicals, ocean dumping and discharge of nutrients (see sections TOXIC SUBSTANCES AND POLLUTION PREVENTION and OCEAN DUMPING).

Source: Coastal Zone Management: Issues for the Five-Year Review of CEPA. Prepared by the Conservation Council of New Brunswick.

What's wrong with CEPA?

Canada does not have a coastal zone management policy or a regulatory framework. Therefore, efforts to maintain coastal ecological functions, biodiversity and habitat, to name a few components of CZM, are disjointed and on the whole ineffective. Pollution, both from point and non-point sources, is one of the major contributors to coastal ecosystem degradation. CEPA, largely because of its narrow substance-by-substance approach and its lack of emphasis on prevention and cumulative effect, is inadequate to protect against such degradation.

What needs to be changed?

Canada must develop both a policy and a legislative framework for CZM which has as its primary goal the restoration and maintenance of coastal ecological functions and biodiversity. Within this framework, CEPA should be the primary legislative vehicle for preventing both point and non-point source pollution in coastal zones. Specifically, CEPA should enable the following initiatives:

8.1 Develop environmental quality objectives, guidelines and codes of practice explicit to maintaining ecological functions and biodiversity in coastal zones and direct research and monitoring efforts to support these objectives.

8.2 Mandate pollution prevention (see TOXIC SUBSTANCES AND POLLUTION PREVENTION section) across all sources, addressing cumulative effect and restoration of degraded sites, and providing vehicles for federal-provincial cooperation in the development of pollution prevention and remediation plans.

8.3 Provide for public participation in decision-making, developing and implementing plans and measures, monitoring and reporting on environmental quality, and access to information.

8. Coastal Zone Management

8.4 To supplement these pollution prevention and site remediation provisions, a Canada Oceans Act should be developed which would include provisions for other CZM components: protection of biodiversity, habitat, and critical natural areas; sustainable resource harvesting and extraction; and a science and technology agenda to support these.

8.5 The final CZM component, watershed (land and water use) management, should be provided for through the existing Canada Water Act or a new Coastal Zone Management Act.

9. Air Pollution

What CEPA says:

The federal government uses Part II of CEPA, TOXIC SUBSTANCES, to regulate some air pollutants through its "toxicity" screen. In addition, the federal government regulates fuel content and vehicle emission standards from the transportation sector, one of the largest sources of air pollution. Fuel content is regulated by CEPA, while emission standards fall under the Motor Vehicle Safety Act and are administered by Transport Canada.

CEPA also provides Environment Canada with the authority to conduct air monitoring, and allows the setting of Objectives, Guidelines and Codes of Practice.

Source: Regarding Air Quality Issues and The Review of CEPA. Prepared by Pollution Probe.

What's wrong with CEPA?

CEPA only deals with fuel content, while new vehicle emissions standards are regulated by Transport Canada under the Motor Vehicle Safety Act. CEPA should address both issues because they are closely related. Vehicle emission standards are clearly an environmental issue and should not be covered under legislation written to address seat belts.

In addition, CEPA does not ensure that Canadians are protected by enforceable ambient air quality standards for all significant air pollutants. CEPA does not stipulate the minimum requirements for an adequate ambient air quality monitoring network. Finally, under CEPA the setting of objectives, guidelines and codes of practice occurs without timelines for implementation, without public participation and without periodic review processes.

What needs to be changed?

The federal government needs to establish its authority over air pollution, since it significantly affects the condition of the environment and human health in many areas of Canada. CEPA can become an important part in preventing air pollution. Changes should include:

9.1 CEPA should provide Environment Canada with the authority to set strict emission standards on all new vehicles. These standards should conform at least with the Low Emission Vehicle Program already adopted by California, British Columbia and several northeast states.

9.2 CEPA should contain enforceable air standards for a variety of air pollutants.

9.3 "Toxic" air pollutants should either be phased-out and banned, or be subject to pollution prevention plans.

9.4 Finally, CEPA should recognize that air pollution from fuel sources results from both combustion and evaporation.

10. Biotechnology

What CEPA says:

Biotechnology is defined in CEPA as "the application of science and engineering in the direct or indirect use of living organisms or parts or products of living organisms in their natural or modified forms." This broad definition includes many applications, including those developed by genetic engineering methods.

CEPA includes biotechnology products in Part II: TOXIC SUBSTANCES and applies a screening methodology similar to that of new chemicals. That is, under Section 26 of CEPA, new biotechnology products must be screened before they can be imported or manufactured in Canada. If they are considered "toxic," as defined under CEPA, then the Minister of Environment can impose conditions on their manufacture, use, release or importation.

Source: CEPA, Chemical New Substances, and Biotechnology. Prepared by the Canadian Institute for Environmental Law and Policy.

What's wrong with CEPA?

Even though CEPA is the main environmental law, most biotechnology products are released into the environment without CEPA having any role. That is, most products of biotechnology are not regulated under CEPA, but under other laws. This allows for inconsistent screenings of biotechnology products and can result in vastly different results.

Under CEPA, biotechnology products are only regulated if they are declared "toxic" as defined by the Act, and since this definition is very narrow, few new biotechnology products will be regulated. Even if a biotechnology product is declared "toxic," companies are not required to follow pollution prevention measures; a new "toxic" biotechnology product can still be released into the environment.

Furthermore, "toxicity" is the only criterion by which biotechnology products are assessed under CEPA. Regulating biotechnology product based on toxicity is insufficient because toxicity was designed to address chemical substances and therefore does not capture the potential range of effects on the environment and health from biotechnology products.

Finally, citizens have very little input into decisions made regarding biotechnology products.

What needs to be changed?

Biotechnology products represent a number of unique risks to the environment and human health. Since many such products include living beings, which can reproduce and spread, it is very difficult to control them once they are released into the environment. Also, the technologies employed in genetic engineering are very recent, resulting often in great uncertainty when these products are evaluated for environmental and human health effects. Therefore, a separate Part, dealing specifically with biotechnology products, should be established under CEPA. This new Part should include the following:

10. Biotechnology

10.1 If different laws continue to be applied to different biotechnology products, all biotechnology products released into the environment should be evaluated with the same criteria, same standards for public participation and available prevention options as in CEPA.

10.2 All biotechnology products should be evaluated on the basis of:

(a) their direct, indirect, long-term, and cumulative environmental and human health effects, and their impact on biodiversity;
(b) their purpose;
(c) their efficacy;
(d) their biological and ecological characteristics;
(e) the availability and effectiveness of monitoring, preventing and treating the waste associated with biotechnology products; and
(f) the availability of alternatives to a proposed product.

10.3 The testing of biotechnology products in the open environment should only occur with specific approval of the Minister of the Environment. Any violations of the conditions of the approval should be prosecuted.

10.4 The public should have a greater role in decisions on biotechnology products, including the right to appeal decisions, the right to be informed of tests in their community, and the right to access the information used to evaluate the biotechnology product.

10.5 CEPA should require the Minister of the Environment to establish a publicly accessible database on all environmental releases of biotechnology products.

10.6 In addition, since many new biotechnology products are entering the market and many issues are arising, a Royal Commission on Biotechnology should be established to debate these issues in a broad and conclusive manner.

11. Biodiversity & Ecosystem Approach

What CEPA says:

In December of 1993, the Canadian government ratified the United Nation's Biodiversity Convention. Biodiversity reflects the variety of life on earth. In turn, the ecosystem approach involves applying ecological principles to resource management and government decision-making to ensure the long term health of ecosystems. There is no direct recognition of biodiversity or the need for an ecosystem approach in CEPA.

Source: Biodiversity and the Ecosystem Approach: Issues for the Five Year Review of the Canadian Environmental Protection Act.
Prepared by the Environmental Law Centre (Alberta) Society.

What's wrong with CEPA?

Canada must act on its obligation to implement the Biodiversity Convention. This must be done by employing an ecosystem approach to biodiversity protection.

What needs to be changed?

CEPA should be changed to give the federal government the direct legislative power to preserve and improve biodiversity via an ecosystem approach.

11.1 The definition sections of CEPA should be amended to define the ecosystem approach and the meaning of biological integrity of ecosystems. In addition, definition of environment should be changed by adding that "ecosystems include associated biodiversity."

11.2 Section 7 of CEPA should be amended to ensure biodiversity is included in provisions pertaining to research, monitoring and publications.

11.3 CEPA should be amended to include the term "jurisdictional entity," that is, the right to control parts of the environment for biodiversity protection.

11.4 CEPA's preamble should be amended to include: "Whereas the Government of Canada in demonstrating national leadership should work with other jurisdictional entities, including other governments and Canadian citizens to establish national environmental quality objectives, ecosystem approaches, objectives and indicators, guidelines and codes of practice."

11.5 Section 8 should be amended to include provisions for the setting of ecosystem objectives and guidelines for adopting an ecosystem approach.

11.6 Sections 6, 7, 8, 9 and 13 should be amended to ensure that the terms ecosystem approach and jurisdictional entities are incorporated.

11. Biodiversity & Ecosystem Approach

11.7 CEPA should be amended to enable an ecosystem response approach to identify potentially toxic substances, or groups or mixtures of substances. CEPA should articulate ecosystem quality objectives, such as the maintenance of ecosystem integrity, to identify unacceptable risk or to determine the toxicity of substances.

11.8 To fulfil Canada's obligations under the Biodiversity Convention, Sections 26 and 34 of CEPA should be amended so that pesticides are assessed for toxicity and if determined toxic, regulated under CEPA.

12. Emergency Planning

What CEPA says:

At present, there are no specific provisions relating directly to emergency planning. Part II of CEPA contains some sections which could require information that would assist in the development of planning programs in cases of environmental emergencies. The development of NPRI under Section 16 is a first step in this regime.

Source: CEPA and Emergency Planning. Prepared by the West Coast Environmental Law Association.

What's wrong with CEPA?

CEPA simply does not address emergency planning, even though industrial accidents involving hazardous chemicals are a significant threat to the health of workers and the environment. While other programs, such as the one done by the Major Industrial Accidents Council of Canada, are useful, they do not require the development of emergency response plans or the reduction of hazardous chemicals used or stored on site.

What needs to be changed?

CEPA needs to include provisions that prevent industrial accidents and disasters caused by hazardous chemicals.

12.1 CEPA should be amended to require that Environment Canada identify a list of chemicals which have the potential to cause serious accidents and then identify their appropriate threshold quantities. For those substances over the threshold, the facilities should report the maximum and average quantities of chemicals stored on site. This information should be public.

12.2 All facilities which meet the threshold limits, including those owned or operated by the federal government, should prepare reduction measures and emergency preparedness plans.

12.3 CEPA should mandate the federal government to work with the provinces, and if necessary unilaterally, to prepare mandatory emergency planning requirements for all other industries.

12.4 CEPA should be modified to accommodate the aspects under federal jurisdiction of the International Labour Organization (ILO) Convention on the Prevention of Major Industrial Accidents.

13. Putting the Federal House in Order

What CEPA says:

Part IV of CEPA gives Cabinet the power to issue environmental guidelines that apply to federal departments and agencies. Under Part IV, Cabinet also has the authority to develop regulations governing waste handling and disposal practices as well as discharges of pollutants by federal agencies.

What's wrong with CEPA?

There has been a failure by the federal government to adequately address the impact of its own operations on the environment. The emphasis in CEPA is on voluntary action; the Minister of the Environment, with few exceptions, can only issue non-enforceable guidelines to other departments. There is strong evidence that these voluntary measures have failed. Second, to regulate, the federal Cabinet must establish that there is no other authority to issue the regulations, and that the Minister who has responsibility for that area concurs (which is highly unlikely). Moreover, only one regulation has been issued, where the Act does give express authority to regulate.

What needs to be changed?

Federal agencies should undergo the same scrutiny as any other individual or organizations that may cause harm to the environment. To achieve this:

13.1 The government must affirm CEPA's role as the paramount environmental law. The Act should be amended to give the Minister of Environment the right to enact, with Cabinet approval, regulations governing other departments, agencies, boards and crown corporations and to enforce them adequately.

13.2 Under CEPA, the Governor in Council should be permitted to make regulations to protect the environment with respect to federal works, undertakings or land, and with respect to the activities and operations of federal departments, boards, agencies and crown corporations. These regulations would take precedence over other regulations under any other Act of Parliament.

13.3 In the absence of regulations developed by the Governor in Council, the Minister of the Environment should be permitted to make "Environment Protec-

Source: CEPA and the Federal House in Order: Reforming the Federal Government's Environmental Performance. Prepared by the Canadian Institute for Environmental Law and Policy.

tion Orders" to protect the environment with respect to federal works, undertakings or lands and with respect to activities and operations of federal agencies, departments, boards and crown corporations.

13.4 Each federal department should develop Environmental Management Plans, outlining how its operations and activities will:

(a) reduce or eliminate pollution;
(b) promote natural resource conservation; and
(c) protect biodiversity.

13.5 The proposed federal Environmental Commissioner can ensure that such departmental Environmental Management Plans are implemented and publicly reviewed.

14. Transboundary Movement of Wastes

What CEPA says:

Sections 41 and 43-45 address the "Export and Import of Toxic Substances and Waste Materials." They allow the federal govemment to decide which hazardous wastes require advance notification for export or import. The federal government publishes these notifications in the Canada Gazette, and exporters and importers must then follow specific conditions in moving hazardous wastes. Also, substances prohibited under CEPA may only be exported for destruction purposes.

CEPA is used to fulfil Canada's obligation under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Canada ratified the Basel Convention through the Export and Import of Hazardous Wastes Regulations under CEPA.

Source: Canadian Environmental Protection Act Review: Transboundary Waste Movement Provisions. Prepared by the Ontario Toxic Waste Research Coalition.

What's wrong with CEPA?

CEPA does not require minimizing the production of hazardous wastes in Canada, nor does it ban the import or export of such wastes. Instead, under CEPA the movement of hazardous wastes is legitimized. Only notices of import and export activities are required. Moreover contrary to its international obligations, Canada continues to allow hazardous waste exports to non-OECD (the Organization for Economic Cooperation and Development) countries.

CEPA does not address municipal, non-hazardous solid wastes, which are increasingly being moved between Canada and the U.S., undermining local and provincial 3Rs programs.

What needs to be changed?

The generation of hazardous and municipal solid wastes causes many environmental and social problems. The transboundary movement of such wastes does little to address these problems. Rather, it just places them somewhere else. Thus, changes to CEPA and the Export and Import of Hazardous Wastes Regulations should include:

14.1 The import and export of prohibited substances should be banned.

14.2 The phase out of exporting hazardous wastes for recycling to non-OECD countries by December 1997. This change is needed to fulfil commitments made under the Basel Convention.

14.3 Exporters and importers of hazardous wastes should be required to develop plans to phase-out such imports and exports.

14.4 The transboundary movement of municipal solid wastes should be included under CEPA, and their export and import phased-out.

Appendix C

A Response to the Proposed Toxic Substances Management Policy for Canada

Submitted to Environment Canada

Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement
517 College Street, Suite 401, Toronto, Ontario M6G 4A2
Telephone (416) 960-2284
Fax (416) 960-9392

CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW & POLICY
517 College Street, Suite 400, Toronto, Ont. M6G 4A

November 30, 1994

Hon. Sheila Copps
Deputy Prime Minister
and Minister of the Environment
House of Commons
Ottawa, Ontario
K1A 0A6

sent by fax: (819)953-3457
original to follow

Dear Ms. Copps,

Please find enclosed the response of the Canadian Institute for Environmental Law and Policy (CIELAP) and the Canadian Environmental Law Association (CELA) to the government's draft Toxic Substances Management Policy (TSMP).

The government of Canada's release of a draft TSMP is an important first step in the development and implementation of a comprehensive policy and regulatory framework for such substances in Canada. Unfortunately, the proposed policy suffers from a number of serious weaknesses, and consequently cannot be endorsed without major revisions.

CELA and CIELAP's major concerns regarding the proposed TSMP include the following:

* the proposed definition of virtual elimination is inconsistent with the principles of pollution prevention and the definition set out by the International Joint Commission;

* the definition of "environment" as outlined in the TSMP excludes occupational environment. The occupational environment should be explicitly included in this definition;

* the criteria of "predominantly anthropogenic" appears to excludes elements and other naturally occurring substances known to have significant health and environmental effects, such as lead and mercury, from action under the proposed TSMP;

* the proposed definition of persistence is inconsistent with the definition of persistence set out by other agencies, including the IJC, and the definition contained in the Great Lakes Water Quality Agreement. Persistence should be defined as having a half-life of 56 days in water and 2 days in air;

* the proposed definition of bioaccumulation is too high and inconsistent with the definitions employed by other agencies. Bioaccumulation should be defined as a bioconcentration factor of at least 500, and preferably 250;

* substances are required to be toxic, persistent and bioaccumulative to be placed on Track 1. A combination of toxicity and persistent, or toxicity and bioaccumulative should be sufficient to place a substance on Track 1;

* the deliberate use and manufacturing of Track 1 substances would be permitted to continue. This approach is inconsistent with that proposed by the IJC for persistent toxic substances;

* there is no commitment to action with respect to Track 2 substances except to encourage voluntary action by users and manufacturers of the substance in question. Pollution prevention plans to eliminate release to the general and occupational environments should be required for such substances; and

* no clear procedures are provided for the "reverse onus" appeal process regarding Track 1 substances. Appeals should require a public hearing before a Board of Review, with provisions for intervenor funding for bona fide public interest intervenors.

CIELAP and CELA look forward to further opportunities to contribute to the development of this important policy by the government of Canada.

Yours sincerely,

M S Mitchell / for

Anne Mitchell
Executive Director
Canadian Institute for Environmental Law and Policy

per Fé de Leo

Paul Muldoon
Counsel
Canadian Environmental Law Association

encl.

cc: Prime Minister Jean Chretien; Charles Caccia, Chair of the Standing Committee on Environment and Sustainable Development; Clifford Lincoln; The Standing Committee on Environment and Sustainable Development; Diane Marleau, Health Canada; Ralph Goodale, Agriculture and Agrifood; Anthony Clarke, Environment Canada; Francois Guimont, Environment Canada

A Response to the Proposed Toxic Substances Management Policy for Canada

Submitted to
Environment Canada

Prepared by

Burkhard Mausberg
Canadian Institute for Environmental Law and Policy

Paul Muldoon
Canadian Environmental Law Association

Mark Winfield
Canadian Institute for Environmental Law and Policy

November 1994

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Appendix 1

I. INTRODUCTION

Toxic contamination of the Canadian environment remains one of the most vital concerns of Canadians. There is increasing evidence that the problems emanating from toxic contamination are more insidious and their effects more far reaching than previously conceived. Urgent, strong, and comprehensive action is needed.

It is in light of this problem that the Canadian Environmental Law Association (CELA) and the Canadian Institute for Environmental Law and Policy (CIELAP) welcome the opportunity to comment on the proposed "Towards a Toxic Substances Management Policy for Canada" (hereinafter referred to as the TSMP). This document will first provide a context for the TSMP. Then it will review the definitions, thresholds and implementation issues related to the TSMP.

II. CONTEXT FOR TSMP

The proposed TSMP has not been developed in a vacuum. Indeed, it is fair to say that the TSMP emerged from a long history of efforts in various parts of the country to address the problem of toxic chemicals. Perhaps one of the most obvious roots of the TSMP pertains to the legal regime in the Great Lakes.

The Great Lakes Experience

In 1978, the Canadian and U.S. governments signed the Great Lakes Water Quality Agreement. Article II of that Agreement states that:

> "The discharge of toxic substances in toxic amounts be prohibited and the discharge of any or all persistent toxic substances be virtually eliminated."

Annex 12 of that Agreement states that, when designing regulatory strategies to implement Article II, those strategies must be undertaken in the "philosophy of zero discharge."

In reviewing governments' progress in furthering this goal, the International Joint Commission (IJC) stated quite unequivocally its interpretation of these provisions:

> "...it is clear to us that persistent toxic substances have caused widespread injury to the environment and to human health. As a society, we can no longer afford to tolerate their presence in our environment and in our bodies. Their use and presence in the Great Lakes environment are also inherently inconsistent with the Agreement's purpose and specific problems. Hence, if a chemical or group of

chemicals is persistent, toxic and bioaccumulative, we should immediately begin a process to eliminate it.[1]"

The recommendation has been echoed through the Commission's work, including a report of one of its advisory committees, the Virtual Elimination Task Force.[2]

Any policy emanating at the federal level must be consistent with, and contribute to, the implementation of the Great Lakes Water Quality Agreement.

Parliamentary Review of the Canadian Environmental Protection Act

A further context for the TSMP is the Parliamentary Review of the Canadian Environmental Protection Act (CEPA). The Act, which is the primary federal statute governing toxic chemicals, is undergoing this review by the Standing Committee on Environment and Sustainable Development. There has been a strong and consistent message from environmental and labour groups on the need for a pollution prevention approach that includes sunset and sunrise protocols to phase-out persistent toxic substances.[3]

This initiative is important as it is where the government's long term goals and approaches with respect to toxic substances will be determined. As such, any toxics management policy must be coordinated with, and preferably incorporated into, the reform of the Canadian Environmental Protection Act.

The Broader Context for Action

While no detailed review of the more recent literature and studies on the effects of toxic chemicals will be provided, it is clear that the implications of the literature and studies are significant. The recently released Dioxin Reassessment undertaken by the U.S. Environmental Protection Agency, for instance, implies that changes in hormone levels or other adverse health effects can occur in humans at or near levels of exposure to dioxin that are already experienced by members of the public. These trends indicate the need for strong, unequivocal action to protect the environment from toxic substances.

III. DEFINITIONS IN THE TSMP

Definition of "Virtual Elimination" - No Measurable Release

According to the proposed TSMP, substances that meet all four criteria will be placed on Track 1. The proposal then states that: "Track 1 substances will be virtually eliminated from the environment through management strategies that ensure no measurable release of the substance."[4] The implication of this statement is that the

definition of virtual elimination is "no measurable release" into the environment.

This definition of virtual elimination must be rejected. There are a number of reasons why the proposed definition should be rejected.

* It Is Inconsistent with the Concept of Pollution Prevention

The proposed approach, which defines the goal of Track 1 as "no measurable release" allows a pollution control response rather than a pollution prevention response. Pollution prevention is defined as approaches that avoids or prevents the use and generation of toxic substances. Its strength is that it emphasizes changes in the industrial process through such techniques as raw product substitution, process reformulation, substitution, and other such techniques.

When the goal is defined as "no measurable release," legitimacy is given to continuing pollution control models that attempt to reduce emissions at the end-of-the-pipe. TSMP does not promote process change or other measures that avoid the use or generation of toxic chemicals. As such, the proposed TSMP reinforces present practices. It will not encourage innovation. It may lead industry to adopt more expensive, and ultimately less efficient, end-of-the-pipe measures. These investments will preempt other pollution prevention investments. In effect, these facilities will be held "hostage" to traditional pollution control technologies rather than pursuing pollution prevention strategies.

* It Will Lead to Endless Debates as to the Definition of What is "No Measurable Release"

Apart from the general concern, there are also practical problems with the "no measurable release" approach. Most importantly, who will define what is the "not measurable" limit? How will that limit be set? What happens if detection technology improves? The reality is that the determination of what is the "no measurable release limit" will be just as difficult, just as controversial and just as practically complex, as existing limits.

* It is Inconsistent with the International Joint Commission's Definition of Virtual Elimination

In its Seventh Biennial Report, the IJC re-iterated its previous approach and views, and states:

> "we...want to continue attempts to **manage** persistent toxic substances after they have been produced or used, or ... **eliminate** and **prevent** their existence in the ecosystem in the first place, ... Since it seems impossible to eliminate discharges of these chemicals ..., a policy of

banning or **sunsetting** their manufacture, distribution, storage, use and disposal appears to be the only alternative."[5]

The Commission has rejected the "no detectable level" as an appropriate preventative approach. The federal government's approach, therefore, is contrary to the direction suggested by the IJC.

Recommendation No. 1:

The definition of "virtual elimination" as "no measurable release" should be rejected. Virtual elimination should be defined in a manner consistent with the definitions offered by the International Joint Commission and implemented through a national pollution prevention framework.

Reverse Onus

The use of the reverse onus concept in the proposed TSMP is an inappropriate use of the concept. The reverse onus concept is a component of the precautionary principle. The precautionary principle states that where there is uncertainty as to the environmental consequence of an activity, precaution should be exercised such that the activity does not proceed. The reverse onus is a mechanism whereby those undertaking such activities have the onus of establishing that the activity is safe.

In the TSMP, the reverse onus concept does not reverse any onus and place it on industry. It is really fashioned as an objection to the fact that a substance has been deemed to be persistent, bioaccumulative and toxic. As such, this section, if it is to be retained at all, should simply be deemed an objection. If this is a process for objections, then a clear procedure must be established to identify how objections should be undertaken, and timelines and thresholds should be established to make it clear when objections will be accepted or overruled.

Recommendation No. 2:

The reverse onus provision in the TSMP should be removed. If some process is to be included to challenge the decisions taken as to the hazard assessment, then clearly laid out rules and procedures should be articulated.

Definition of Environment

The definition for "environment" outlined in the proposed TSMP is limiting. It fails to include clearly the occupational environment. Occupational exposure is a major source or human exposure to toxic substances and should be considered in the TMP.

Recommendation No. 3:

The TSMP definition for "environment" should explicitly include the occupational environment.

Assessing Substances As a Class

One of the obvious deficiencies of the TSMP is that it takes a substance-by-substance approach rather than a class approach. Admittedly there is no accepted methodology for proceeding with class assessments. However, TSMP should include a commitment to work toward class assessments.

Recommendation No. 4:

The TSMP should include a commitment to developing a methodology for class assessments and then proceed by way of class assessments rather than substance-by-substance assessment.

The TSMP and the Canadian Environmental Protection Act

At present, the proposed TSMP does not explain how it is to be related to the Canadian Environmental Protection Act (CEPA). This is troublesome as there is a Parliamentary Review of CEPA currently being undertaken. The TSMP should be interpreted as a method to "fast-track" and take the most severe recourse to the most dangerous substances. In this context, the TSMP could provide a means to direct specific action at toxic, persistent and bioaccumulative substances. Indeed, the value of the TSMP may depend, in large part, to the extent to which it is incorporated into CEPA.

Recommendation No. 5:

The TSMP should become a part of CEPA as a means to fast-track and facilitate direct action against inherently dangerous substances.

IV. THRESHOLDS AND CRITERIA

Exclusion of Naturally Occurring Substances

The TSMP explicitly excludes elements and naturally occurring inorganic substances from the virtual elimination goal, thereby ignoring a large category of pollutants which have been shown to cause severe environmental and human health damage.

This exclusion is unique from the perspective of the efforts made by other jurisdictions

and scientific bodies to identify chemicals for virtual elimination. For example, the International Joint Commission and the Ontario Ministry of Environment and Energy (MOEE) have not made this distinction between substances. Their view is that no matter what the nature of a substance, if it is toxic, bioaccumulative and persistent, it should be phased-out and banned. The proposed TSMP does not follow this approach.

Moreover, the TSMP includes an "expert judgement" for those substances which have human-made and natural sources. That is, "expert judgement" will be applied to determine whether or not a substance is released in sufficient quantities by human-made sources in order to justify virtual elimination. This "expert judgement" is a significant step backwards. It allows an administrative judgement, with little or no accountability structures. What one "expert" says may be completely different than what another "expert" says. There is, for example, already a disagreement on whether toxic PAHs are included or not in the proposed TSMP.

Recommendation No. 6:

All substances, regardless of their nature, should be eliminated from human sources if they exceed the thresholds for toxicity and, persistence or bioaccumulation.

Persistence

The TSMP is based on levels of persistence far higher than those proposed by other jurisdictions, scientists, or independent bodies, including those used by Environment Canada for one of its voluntary programs [Accelerated Reduction/Elimination of Toxics (ARET)]. This has two very different implications.

First, Environment Canada would be administering programs based on a dissimilar scientific basis. However, there is a need for consistency in delivering governmental programs, especially since the proposed TSMP is national in scope and is urgently needed. Secondly, by allowing higher persistence levels, the proposed TSMP would allow toxic chemicals into the environment which will remain there for a long time. This would result in continued damage to human health and the environment.

Persistence is measured as the half-life of a substance in the various media in the environment (air, water, soil or sediment). The TSMP proposes a persistence (half-life) of *182 days* in water. But all other scientific evidence says this is too high. In fact, TSMP quotes several scientific sources which propose a lower half-life. The IJC, MOEE, university scientists and even industry suggest a half-life of *56 days* or less as a definition for persistence.[6]

It is surprising that the federal government would propose to use such a high level of persistence. It is especially surprising since the TSMP references scientific evidence

and then chooses to ignore it. It is also surprising since the federal government signed the Great Lakes Water Quality Agreement with the U.S., which specified persistence as a half-life of 56 days in water.

Recommendation No. 7:

The persistence criteria need to reflect, and be consistent with, scientific evidence. In particular, the half-life of a substance in surface water needs to set at 56 days, and at 2 days in air.

Bioaccumulation

The proposed TSMP sets an unusually high level of bioaccumulation for a substance to follow the virtual elimination track. The TSMP indicates that a Bioconcentration Factor (BCF) of greater than 5,000 is the cutoff for substances to be virtually eliminated (if it also exceeds the persistence, toxicity and anthropogenic criteria).

However, all other scientific evidence used by the drafters of the TSMP recommends lower levels of bioconcentration. The MOEE and the ARET processes, for example, uses a BCF of greater than 500 as a cut-off for virtual elimination.

Recommendation No. 8:

The BCF should be lowered to at least 500, and preferably to 250.

Toxicity

In order for a substance to follow the virtual elimination track, it must be toxic as defined by the Canadian Environmental Protection Act (CEPA) or it must be 'CEPA-toxic equivalent.'

This definition of toxic has a number of serious problems, which have been described elsewhere in detail.[7] 'Toxic' as defined by CEPA sets a very high threshold for action, the definition is reactive (i.e., significant damage has to have occurred before action is taken), and the definition assumes that there is enough information to know the quantities or concentrations of substances in the environment.

As a result of using this definition of toxicity, the federal government has recently found only 25 of 44 priority chemicals toxic. Moreover, the federal government found that, by using this definition of toxic, it could not determine whether 13 chemicals were toxic or not. The government cited "insufficient information" as the reason.

Recommendation No. 9:

For the TSMP to work effectively and in a preventative manner, it must be disconnected from the CEPA definition of toxicity. Rather than using the CEPA toxic approach, TSMP should use the hazard assessment developed by the MOEE (see Appendix 1 for the hazard assessment).

Combination of Criteria

For a substance to be virtually eliminated, the TSMP requires that a chemical must meet all the criteria: be predominantly anthropogenic, persistent, bioaccumulative and toxic. Thus, not only does the TSMP require very high thresholds, it also requires that a substance meet all these thresholds. This will allow the continued release of substances clearly damaging to human health and the environment.

Recommendation No. 10:

Substances emanating from human sources should be phased-out and banned if they are toxic and, bioaccumulative or persistent.

V. IMPLEMENTING THE TSMP

Existing Track 1 Substances

The stated goal of the proposed TSMP is the "virtual elimination" of environmental releases of Track 1 substances (toxic, persistent, bioaccumulative, and predominantly anthropogenic). Virtual elimination is defined as "no measurable release."

Given the serious environmental and human health effects associated with substances of this nature, this definition is inadequate as it would permit the use of Track 1 substances within closed-loop systems, or where it is available, end-of-pipe technology to reduce discharges below measurable levels. Even if the environment is defined to include the occupational environment, this approach does not address the possibility of upsets or accidental releases, or the possibility of cross-media transfers which inevitably arise with end-of-pipe pollution control technologies.[8] It may also encourage firms to make investments in end-of-pipe technologies rather than seeking to develop substitutes or alternatives to the substances in question.[9]

Recommendation No. 11:

The intentional manufacturing or use of substances found to meet the Track 1 criteria should be banned through regulations made under CEPA. Exemptions from this rule should only be permitted under truly extraordinary and exceptional circumstances,

such as the substance being a cure for AIDS or Cancer. Exemptions should only be granted following a public review by a Board of Review at the conclusions of which a two-thirds majority of the Board recommends an exemption. In the event that a two-thirds majority of the Board does not recommend an exemption, the substance should be banned from manufacturing or use, with no further appeals. In the event that the Board recommends an exemption, the Minister should still have the option of banning the use or manufacturing of the substance. Any Track 1 substance given exceptional approval should still be required to be subject to a pollution prevention plan to eliminate the possibility of a release of the substance into the general or occupational environments. Intervenor funding for bona fide public interest intervenors in Board of Review Proceedings should be provided.[10]

Where Track 1 substances are created as by-products of the manufacturing or use of non-Track 1 substances, pollution prevention plans should be developed and implemented with respect to the Track 1 substances being created. These plans should provide for the elimination of release of the substance in question into the general or occupational environment. The manufacturing or use of non-Track 1 substances which result in the Track 1 by-products should be discouraged as a matter of public policy.

Existing Track 2 Substances

The proposed TSMP's treatment of Track 2 substances (toxic, but not bioaccumulative, persistent, and predominantly anthropogenic) is extremely disappointing. The proposed TSMP indicates that the federal government will "advocate," not require the life cycle, cradle-to-grave management of these substances (p.3) and "encourage," not require, pollution prevention in relation to them (p.3). Given the very stringent standard of proof which Environment Canada and Health Canada have set for the establishment of "toxicity" for the purposes of CEPA, substances found to be "toxic" for the purposes of CEPA, by definition are having, or have the potential to have, significant environmental or human health effects.

Recommendation No. 12:

The environmental release of such substances should not be permitted under the TSMP. Rather, pollution prevention plans should be required to be developed and implemented for non-Track 1 "CEPA toxic" (Track 2) substances. These pollution prevention plans should be required to provide for the elimination of release into the general and occupational environment of the Track 2 substances in question.

New Substances[11]

The proposed TSMP would permit the use and manufacturing of Track 1 (toxic, persistent, and bioaccumulative) new substances provided that it could be

demonstrated that there would be no release of these new substances into the environment (virtual elimination). Given the potential environmental and human health effects of such substances, this approach should not be adopted.

Recommendation No. 13:

Track 1 New Substances

The intentional use or manufacturing of new substances which meet the Track 1 criteria should not be permitted, except under truly extraordinary and exceptional circumstances similar to those outlined for existing Track 1 substance. As with existing Track 1 substances exemptions should only be granted following a recommendation by a two-thirds majority of a Board of Review. In the event that a two-thirds majority of the Board does not recommend an exemption, the manufacturing or use of the substance should be prohibited, with no further appeals. If the Board recommends an exemption, the Minister should still have option of prohibiting the use or manufacturing of the substance.

Track 2 New Substances

Pollution prevention plans, providing for the virtual elimination from the general and occupational environment of new "CEPA toxic" Track 2 substances should be required prior to their use or manufacturing being permitted in Canada. This would be consistent with the treatment of existing Track 2 substances.

By-Products of New Substances

Current CEPA provisions do not permit new substance assessment of by-products of use of new substances. The deficiency should be addressed during the CEPA review.[12] *If a Track 1 substance is created as an inevitable by-product of the use or manufacturing of a non-Track 1 or even non-"CEPA toxic" new substance, the use or manufacturing of new substance should be prohibited. Exemptions from this rule should only be permitted under exceptional circumstances as defined above. A pollution prevention plan to eliminate release to the general and occupational environments should be required to be developed and implemented if the by-product is a Track 2 substance.*

VI. CONCLUSION

The government of Canada's release of a draft Toxic Substances Management Policy is an important first step in the development and implementation of a comprehensive policy and regulatory framework for such substances in Canada. Unfortunately, the proposed policy suffers from a number of serious weaknesses, and consequently

cannot be endorsed without major revisions.

CIELAP and CELA's major concerns regarding the proposed policy include the following:

* the proposed definition of virtual elimination is inconsistent with the principles of pollution prevention and the definition set out by the IJC;

* the definition of "environment" as outlined in the TSMP excludes occupational environment. The occupational environment should be explicitly included in this definition;

* the criteria of "predominantly anthropogenic" appears to excludes elements and other naturally occurring substances known to have significant health and environmental effects, such as lead and mercury, from action under the proposed TSMP;

* the proposed definition of persistence is inconsistent with the definition of persistence set out by other agencies, including the IJC, and the definition contained in the Great Lakes Water Quality Agreement. Persistence should be defined as having a half-life of 56 days in water and 2 days in air;

* the proposed definition of bioaccumulation is too high and inconsistent with the definitions employed by other agencies. Bioaccumulation should be defined as a bioconcentration factor of at least 500, and preferably 250;

* substances are required to be toxic, persistent and bioaccumulative to be placed on Track 1. A combination of toxicity and persistent, or toxicity and bioaccumulative should be sufficient to place a substance on Track 1;

* the *deliberate* use and manufacturing of Track 1 substances would be permitted to continue. This approach is inconsistent with that proposed by the IJC for persistent toxic substances;

* there is no commitment to action with respect to Track 2 substances except to encourage voluntary action by users and manufacturers of the substance in question. Pollution prevention plans to eliminate release to the general and occupational environments should be required for such substances; and

* no clear procedures are provided for the "reverse onus" appeal process regarding Track 1 substances. Appeals should require a public hearing before a Board of Review, with provisions for intervenor funding for *bona fide* public interest intervenors.

CELA and CIELAP look forward to further opportunities to contribute to the development of this important policy by the government of Canada.

ENDNOTES

1. International Joint Commission, Sixth Biennial Report to the Governments of Canada and the United States (Ottawa - Washington, 1992), p. 4.

2. Report to the International Joint Commission, Report of the Virtual Elimination Task Force (Windsor, 1993).

3. See, for instance, the submission of a number of members of the Canadian Environmental Network Toxics Caucus, Reforming the *Canadian Environmental Protection Act* (September 1994), especially, Paul Muldoon, "Incorporating Pollution Prevention into Part II of CEPA: An Agenda for Reform."

4. Environment Canada, Towards a Toxic Substances Management Policy for Canada (Ottawa, September 1994), p. 2.

5. International Joint Commission, Seventh Biennial Report to the Governments of Canada and the United States (Ottawa-Washington, 1994), p. 26.

6. New Directions Group, Discussion Paper (1991).

7. See: P. Muldoon. "Incorporating Pollution Prevention into Part II of CEPA: An Agenda for Reform." in B. Mausberg, P. Muldoon, and M. Winfield [eds.], Reforming the *Canadian Environmental Protection Act*. (Ottawa: Canadian Environmental Network, 1994).

8. Canadian Institute for Environmental Law and Policy and National Wildlife Federation, Prescription for a Healthy Great Lakes: Report of the Program for Zero Discharge (Toronto and Ann Arbor: CIELAP and NWF, 1991), ch. 4.

9. R. Kemp, "An Economic Analysis if Cleaner Technology: Theory and Evidence," in K. Fischer and J. Schot, Environmental Strategies for Industry (Washington D.C.: Island Press, 1992), p. 281.

10. See M. Winfield, ed., Reforming the *Canadian Environmental Protection Act*: A Submission to the Standing Committee on Environment and Sustainable Development (Toronto: Canadian Institute for Environmental Law and Policy, September 1994 (CIELAP Brief 94/7)), Recommendation 27.

11. These Recommendations expand on Winfield, Reforming the *Canadian Environmental Protection Act*, Recommendations 12 and 13.

12. Winfield, Reforming CEPA, Recommendation 16.

Table 1.6: Ontario MOE Scoring System Summary Chart

Parameter Name	Endpoint & Units	Scoring Criteria 0	4	7	10
Environmental Persistence	$t_{1/2}$ (days)	≤10	>10 to 50	>50 to 100	>100
Bioaccumulation	BCF log k_{ow}	≤20 ≤2.0	>20 to 500 >2.0 to 4.0	>500 to 15000 >4.0 to 6.0	>15000 >6.0

Parameter Name	Endpoint & Units	0	2	4	6	8	10
Acute Lethality	oral LD_{50} mg/kg	>5000	>500-5000	>50-500	>5-50	>0.5-5	≤0.5
	dermal LD_{50} mg/kg	>5000	>500-5000	>50-500	>5-50	>0.5-5	≤0.5
	inhalation LD_{50} mg/m³	>15000	>1500-15000	>150-1500	>15-150	>1.5-15	≤1.5
	aquatic LC_{50} mg/L	>1000	>100-1000	>10-100	>1-10	>0.1-1	≤0.1
Chronic/Subchronic Toxicity, Non-Mammals	aquatic EC_{50}, mg/L MATC, mg/L NOAEC, mg/L	≥20 ≥2 ≥0.2	2-<20 0.2-<2 0.02-<0.2	0.2-<2 0.02-<0.2 0.002-<0.02	0.02-<0.2 0.002-<0.02 0.0002-<0.002	<0.02* <0.002* <0.0002*	<0.02* <0.002* <0.0002*
	terrestrial subchronic NOEL mg/kg/d chronic NOEL mg/kg/d	≥1000 ≥500	100-<1000 50-<500	10-<100 5-<50	1-<10 0.5-<5	<1* <0.5* *in one genus	<1* <0.5* *in different genera
Chronic/Subchronic Toxicity, Plants	Water, mg/L Air, mg/m³ Soil, mg/kg						
	% Mass/Growth Reduction: ≤5% (NOAEL) water air soil	 >10 >100 >100	 >1-10 >10-100 >10-100	 >0.1-1 >1-10 >1-10	 >0.01-0.1 >0.1-1 >0.1-1	 0.001-0.01 0.01-0.1 0.01-0.1	 <0.001 <0.01 <0.01
	>5-50% (EC_{50}) water air soil	 >100 >1000 >1000	 >10-100 >100-1000 >100-1000	 >1-10 >10-100 >10-100	 >0.1-1 >1-10 >1-10	 0.01-0.1 0.1-1 0.1-1	 <0.01 <0.1 <0.1
	>50% water air soil	 >1000 >10000 >100000	 >100-1000 >1000-10000 >1000-10000	 >10-100 >100-1000 >100-1000	 >1-10 >10-100 >10-100	 0.1-1 1-10 1-10	 <0.1 <1 <1
Chronic/Subchronic Toxicity, Mammals**	oral NOEL mg/kg/day	>1000	>100-1000	>10-100	>1-10	>0.1-1	≤0.1
	inhalation NOEL mg/m³	>3000	>300-3000	>30-300	>3-30	>0.3-3	≤0.3
Teratogenicity	mg/kg/day	no terata, or terata only at >1000	terata or developmental anomalies at >50-1000	terata or developmental anomalies at >10-50	terata or developmental anomalies at >1-10	terata at >0.1-1, without overt maternal toxicity	terata at ≤0.1 without overt maternal toxicity
Carcinogenicity	human and animal bioassay data	no tumours in adequate studies on at least two species, and does not interact with genetic material	tumours in only one animal species, negative results in others	causes benign tumours in more than one species, and does not interact with genetic material; promotor only; or causes cell transformation *in vitro* only (negative evidence *in vivo*)	tumourigenic in bioassays at doses causing metabolic enzyme saturation, or associated with lesions that predispose to tumours. No interaction with genetic material	indirect-acting carcinogen, no interaction with genetic material	direct-acting carcinogen that interacts with genetic material

** **Note:** The *Chronic/Subchronic Toxicity, Mammals* criteria are based on studies of ≥90 days duration. If only shorter-term subchronic studies are available, the data are modified as follows, for scoring purposes:

Study duration 28-89 days - multiply criteria by 10
Study duration ≤28 days - multiply criteria by 100

Appendix D

At the Environmental Crossroads:
The CEPA Review and
the Future of Canada's Environment

Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement
517 College Street, Suite 401, Toronto, Ontario M6G 4A2
Telephone (416) 960-2284
Fax (416) 960-9392

CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW & POLICY
517 College Street, Suite 400 Toronto, Ont M6

Date: October 24, 1995 **For Immediate Release**

NRCan and Industry Canada Trying to Derail Environmental and Health Protection Initiatives

Ottawa -- Canadian environmental organizations today accused Natural Resources Canada (NRCan) and Industry Canada of attempting to derail a much needed and long-overdue upgrade of Canadian laws protecting the environment and human health.

At a Parliament Hill press conference, environmental organizations provided definitive responses to several issues raised by leaked NRCan and Industry Canada documents reported in the press which attacked recommendations for reforming the Canadian Environmental Protection Act (CEPA). The groups also presented a history of NRCan's dismal environmental track record.

"These departments are attempting to undermine crucial legislative reforms that are needed to strengthen environmental and human health protection in Canada by pushing the public fear buttons: job loss, threats to competitiveness, costs and bad science," said Paul Muldoon of the Canadian Environmental Law Association. "There's a simple term for this tactic -- it's called scaremongering."

In a written brief released at the press conference, the environmental groups answered each of the four issues these departments have raised in their attacks on recommended improvements to CEPA:

- Science -- Strong scientific evidence supports Canada adopting preventive environmental and health policies, contrary to NRCan's claims of "bad science";

- Competitiveness -- Regulatory incentives for industries to invest in clean production enhances, rather than diminishes as NRCan claims, Canada's competitiveness;

- Consistent Policy -- The recommendations for strengthening CEPA are entirely consistent with the present Liberal government's environmental policy and election promises, as opposed to NRCan's opposition which stands in stark contrast;

- Federal Role -- The federal government has a clear role to play in providing national and international policy leadership for Canada, without in any way interfering with provincial jurisdiction as NRCan maintains.

"These departments' understanding of the links between environmental and economic policy are firmly rooted in the past, not the future," said Mark Winfield of Canadian Institute for Environmental Law and Policy, "They fail to recognize the broadly accepted linkages between pollution prevention, environmental sustainability and economic efficiency, or the international trend towards the phase-out of persistent toxic substances due to their widely acknowledged environmental and human health effects."

Environmental organizations publicly challenged Ministers McLellan and Manley to explain:

I) Why their departments are opposing recommendations for strengthening environment and health protection in Canada; and

II) Why their departments are undermining legislative initiatives to implement policies such as pollution prevention, or the phasing out of persistent toxic substances, when these policies were part of the Liberal government's election platform.

Canada's main environmental legislation, CEPA, is undergoing a statutory five-year review. In June, following nation wide hearings, the House of Commons Standing Committee on Environment and Sustainable Development issued 141 recommendations for reforming CEPA, in a report entitled *It's About Our Health: Towards Pollution Prevention.*

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For more information, contact:

Paul Muldoon, Canadian Environmental Law Association, 416-960-2284
Mark Winfield, Canadian Institute for Environmental Law and Policy, 416-923-3529
David Coon, Conservation Council of New Brunswick, 506-458-8747

Access the CEPA Review World Wide Web Site: http://www.web.apc.org/cepa911 (through the INTERNET)

Attention Editors

For additional information regarding the Canadian Environmental Protection Act review, please contact members of the CEN Toxics Caucus listed below.

William Andrews
WEST COAST ENVIRONMENTAL LAW ASSOCIATION AND RESEARCH FOUNDATION
207 West Hastings St., Ste. 1001
Vancouver, BC
V6B 1H7
T(604)684-7378
F(604)684-1312
E-MAIL: wcelrf@unixg.ubc.ca

David Bennett
CANADIAN LABOUR CONGRESS
2841 Riverside Dr.
Ottawa, ON
K1V 8X7
T(613)521-3400
F(613)521-4655

Michel Bélanger
CENTRE QUEBECOIS DU DROIT DE L'ENVIRONNEMENT
2360 rue Notre-Dame ouest, Ste. 307
Montreal, PQ H3J 1N4
T(514)931-9190
F(514)931-1926

Stephanie Cairns
PEMBINA INSTITUTE FOR APPROPRIATE DEVELOPMENT
Box 7558
Drayton Valley, AB T0E 0M0
T(403)542-6272
F(403)542-6464
E-MAIL: piad@bach.ccinet.ab.ca

Stephane Gingras
CEN Toxics Caucus SOP Representative
GREAT LAKES UNITED
2360 rue Notre-Dame ouest, Ste. 307
Montreal, PQ H3J 1N4
T(514)933-0262
F(514)931-1926

Ross Hume Hall
RETIRED PROFESSOR
MCMASTER UNIVERSITY
P.O. Box 239
Mt. Tabor Road
Danby, Vermount
05739-0239
T(802)293-5149
F(802)293-5717

John Jackson
ONTARIO TOXIC WASTE RESEARCH COALITION
17 Major Road
Kitchener, ON N2H 4R1
T(519)744-7503
F(519)744-1546
E-MAIL: jjackson@web.apc.org

Arlene Kwasniak
ENVIRONMENTAL LAW CENTRE
Suite 201, 10350-124th St.
Edmonton, AB T5N 3V9
T(403)482-4891
F(403)488-6779
E-MAIL: elc@web.apc.org

Elizabeth May
SIERRA CLUB OF CANADA
1 Nicholas St.
Ste. 620
Ottawa, ON K1N 7B7
T(613)241-4611
F(613)241-2292

Julia Langer
WORLD WILDLIFE FUND CANADA
90 Eglinton Ave., Ste. 501
Toronto, ON M1P 2Z7
T(416)489-8800
F(416)489-3611
E-MAIL: jlanger@web.apc.org

Burkhard Mausberg
GREAT LAKES UNITED
1300 Elmwood Ave.
SUCaB, Cassety Hall
Buffalo, NY 14222
T(716)886-0142
F(716)886-0303
E-MAIL: burkhard@web.apc.org

Brian Pannell
POLLUTION PROBE
12 Madison Ave.
Toronto, ON M5R 2S1
T(416)926-1907
F(416)926-1601
E-MAIL: pprobe@web.apc.org

Beverley Thorpe
WOMEN'S NETWORK ON HEALTH AND ENVIRONMENT
736 Bathurst St.
Toronto, ON M5S 2R4
T(416)516-2600
F(416)531-6214
E-MAIL: bthorpe@web.apc.org

THE CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) REVIEW

BACKGROUNDER

The Standing Committee's Report

On June 20, the House of Commons Standing Committee on Environment and Sustainable Development delivered its report on the review of the *Canadian Environmental Protection Act* (CEPA). A five-year review of CEPA by the Standing Committee was mandated in CEPA when the Act was enacted in 1988. The Committee outlined a comprehensive vision of the federal environmental role and recommended major changes to the Act. The Committee's report included recommendations for amendments in the areas of:

- toxic substances assessment and pollution prevention;
- the assessment and regulation of biotechnology products;
- ocean dumping and coastal zone management;
- the role of First Nations in environmental protection;
- the ecosystem approach to environmental protection;
- environmental management within the federal government;
- public participation in federal environmental decision-making; and
- federal environmental law enforcement.

Environment Minister Sheila Copps has expressed support for the Committee's recommendations, and had originally hoped to have a government response to the report prepared by mid-September. However, it now seems likely that the government response will not be released until mid-November, closer to the 150 day deadline for a government reply to a House of Commons committee report.

The release of the government response to the Committee's report will likely be followed by a brief (two-month) consultation period, after which the drafting of amendments to CEPA will begin. It is reported that Environment Canada hopes to have a CEPA amendment package introduced into the House of Commons and passed second reading before the House rises at the end of June 1996. Environment Canada officials are currently engaged in intense discussions with representatives of other government departments regarding the content of the government response to the Committee's report.

The Need for A Renewed CEPA

Among the major problems which have been identified with CEPA:

- the failure to complete assessments of the "toxicity" of 13 of the 44 substances placed on the Priority Substances List (PSL) in 1988 within the prescribed 5 year time-frame;
- the finding of a number of substances known to have toxic properties and to be present in the Canadian environment, such as Toluene and Used Crankcase Oils, not to be "toxic" for the purposes of the Act;
- to date regulations have only been put in place regarding 3 (CFC's, chlorinated pulp effluent and PCB's) of the 26 PSL substances found to be "toxic" for the purposes of CEPA;

- despite evidence of significant environmental problems related to the activities of federal agencies, only one regulation, regarding PCB's has been made under the Act's federal house in order provisions;
- an enforcement regime which has never been strong, and which now appears to be on the edge of collapse, with only 3 prosecutions being undertaken under the Act last year, resulting in a total of $8,000 in fines; and
- major gaps in the legislative framework regarding biotechnology products, the role of First Nations in environmental protection, coastal zone management and other areas.

Industry Response to the Committee's Report

Unfortunately, many of the Committee's recommendations are meeting with intense opposition from some industrial sectors, particularly chemicals, petrochemicals and mining, and their positions are being strongly supported by Natural Resources Canada and Industry Canada officials. These industries are reported as opposing the Committee's recommendations that:

- greater emphasis be placed on the intrinsic toxic properties of substances in evaluations under CEPA;
- strong action be taken towards the ban or phase-out of bioaccumulative persistent toxic substances;
- pollution prevention planning requirements for CEPA "toxic" substances be established;
- stronger controls be placed on ocean dumping;
- the CEPA enforcement regime be strengthened; and
- the opportunities for public participation in decision-making under CEPA be expanded.

The Linkages Between the Committee's Recommendations and other Government Initiatives

The House of Commons Standing Committee on Environment and Sustainable Development's report on CEPA has provided Canada's first comprehensive federal environmental policy review since the June 1992 World Conference on Environment and Development (the Rio Conference). The Committee's report is consistent with the direction for environmental policy established in the federal Liberal Party's October 1993 Red Book. It is also consistent with the direction of the federal government's Toxic Substances Management Policy and its Strategic Framework for Pollution Prevention.

The Committee's Report and Sound Science

The Committee's recommendations for strong action towards the phase-out of persistent toxic substances are also consistent with the growing consensus on the need for action with respect to such substances in the scientific community, the recommendations of the International Joint Commission in its 5th, 6th and 7th Biannual reports, and the actions of the European Union and an increasing number of individual OECD nations. Similarly, its recommendations regarding pollution prevention planning for all substances found to be "toxic" for the purposes of CEPA are consistent with the direction already taken in many U.S. states. These programs have resulted significant environmental and economic benefits.

Pollution Prevention, Environmental Quality and Competitiveness

The critics of the Committee's recommendations have failed to provide any specific evidence of how the implementation of the Committee's recommendations would negatively affect the competitiveness of Canadian industry. What evidence exists suggests that the impact of a well-designed implementation program would be neutral to positive. Indeed, given the international trend towards the phase-out of persistent toxic substances, and to strengthen controls on toxic substances generally, there may be significant competitive advantages to be gained in the development of alternative processes and products. More broadly, the attacks on the Committee's report ignore the strong linkages which have been made between pollution prevention, eco-efficiency and enhanced competitiveness over the past few years.

Federal-Provincial Relations

With respect to federal provincial-relations, the bulk of the Committee's recommendations deal with matters under federal jurisdiction, or where federal standards have been established for many years. In the case of the assessment of new substances, including chemicals and biotechnology products, federal processes already exist in these areas, and it would simply be irrational and ultimately ineffective for each province to establish its own assessment process.

The Committee's recommendations would also strengthen the federal role thought the establishment of environmental standards for new and existing substances found to be "toxic" for the purposes of CEPA. Such standards would provide baseline environmental requirements with respect to the most serious environmental contaminants in Canada. This is essential to the federal government's capacity to provide a minimum level of environmental quality to all Canadians through the existing of such standards. The provinces would continue to be able to set environmental standards higher than the federal standards for CEPA "toxic" substances if they choose to do so. The Committee also has recommended that the provisions of CEPA which are intended to ensure an efficient interface between federal and provincial requirements, such as administrative and equivalency agreements continue, albeit with strengthened public accountability mechanisms.

The achievement of environmentally sustainable development in Canada will require federal leadership on national and international environmental issues. There must also be effective environmental protection within federal jurisdiction, federally-established minimum national standards in areas of national concern such as toxic substances, products of biotechnology, and activities which pose transboundary threats to the environment, and continued federal leadership in environmental science. The House of Commons Standing Committee on Environment and Sustainable Development's recommendations provide the focus necessary, in a period of fiscal restraint, to achieve these goals.

Prepared by:

Canadian Institute for Environmental Law and Policy
October 1995

For more information or comments contact:

CEN Toxics Caucus CEPA Review World Wide Web Site: http://www.web.apc.org/cepa911
(Access through INTERNET)

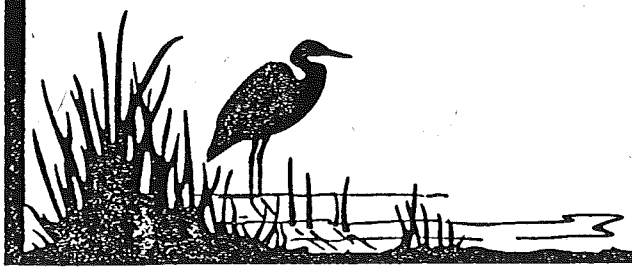
AT THE ENVIRONMENTAL CROSSROADS:

THE CEPA REVIEW AND THE FUTURE OF CANADA'S ENVIRONMENT

Prepared for Member Groups of:

The Canadian Environmental Network -- Toxics Caucus

October 24, 1995



Prepared by:

Beverly Thorpe

with the assistance of:

Jay Palter and Mark Winfield

In the past, environmental policy has focused on managing and controlling the release of pollutants entering the environment. This approach has had only limited success. Canada needs a new approach that focuses on preventing pollution at source. Timetables must be set for phasing out all use of the most persistent toxic substances. Manufacturing innovations are needed to avoid the use or creation of pollutants in the first place; for example, through raw material substitution or closed-loop processes that recycle chemicals within the plant. There is no alternative if Canadians wish to stop long-term toxic pollutants from entering our air, soil, and water. A Liberal government will use the upcoming five-year review of the Canadian Environmental Protection Act to make pollution prevention a national goal and to strengthen the enforcement of federal pollution standards.

CREATING OPPORTUNIT

The Liberal Plan for Canada

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AT THE ENVIRONMENTAL CROSSROADS: THE CEPA REVIEW AND THE FUTURE OF CANADA'S ENVIRONMENT

I. INTRODUCTION

1) The Standing Committee's Report on CEPA

On June 20, the House of Commons Standing Committee on Environment and Sustainable Development delivered its report on the review of the *Canadian Environmental Protection Act* (CEPA). A five-year review of CEPA by the Standing Committee was mandated in CEPA when the Act was enacted in 1988. The major problems with CEPA identified by the Standing Committee in its review included:

- the failure to complete assessments of the "toxicity" of 13 of the 44 substances placed on the Priority Substances List (PSL) in 1988 within the prescribed 5 year time-frame;
- the finding of a number of substances known to have toxic properties and to be present in the Canadian environment, such as Toluene and Used Crankcase Oils, not to be "toxic" for the purposes of the Act;
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- an enforcement regime which has never been strong, and which now appears to be on the edge of collapse, with only 3 prosecutions being undertaken under the Act last year, resulting in a total of $8,000 in fines; and
- major gaps in the legislative framework regarding biotechnology products, the role of First Nations in environmental protection, coastal zone management and other areas.

In its report, the Committee outlined a comprehensive vision of the federal environmental role and recommended major changes to the Act to address these problems. In particular, the Committee made recommendations for amendments in the areas of:

- toxic substances assessment and pollution prevention;
- the assessment and regulation of biotechnology products;
- ocean dumping and coastal zone management;
- the role of first nations in environmental protection;

- the ecosystem approach to environmental protection;
- environmental management within the federal government;
- public participation in federal environmental decision-making; and
- federal environmental law enforcement.

The Committee's recommendations regarding toxic substances and pollution prevention have been at the centre of growing controversy as the government approaches the November 17 deadline, established by House of Commons rules, for a government response to the Committee's report. The federal government response will be bellwether indicator as to whether it will take its responsibilities regarding toxic substances and other aspects of environmental protection seriously.

2) The Attack on the Standing Committee's Recommendations

In the past week, evidence has emerged of an effort by officials of Natural Resources Canada and Industry Canada to block a strong government response in support of the Standing Committee's recommendations.[1] The Committee's report has also been attacked in an editorial in Canada's self-proclaimed national newspaper, The Globe and Mail.[2] Criticisms of the Committee's recommendations have been focused in four areas:

- claims that the Committee's recommendations regarding the assessment and regulation of toxic substances are not based on "sound science;"

- claims that the implementation of Committee's recommendations would weaken the competitiveness of Canadian Industry;

- claims that the Committee's recommendations would damage federal-provincial relations, particularly in the context of the Quebec sovereignty referendum; and

- claims that the Committee's recommendations are inconsistent with existing government policy.

3) The Purpose of This Report

This report examines the basis of the environmental and health problems which the Committee address through its recommendations. This report also responds to the four major criticisms which have been levelled at the Committee's recommendations. An examination of Canada's recent environmental track record at the international level is included as well. This includes a discussion of the role Natural Resources Canada in the development of Canada's positions on international environmental issues.

II. "SOUND SCIENCE" AND THE STANDING COMMITTEE'S REPORT

1) Introduction

One of the major criticisms apparently being levelled against the Standing Committee's CEPA report is that it is not based on sound science. Critics of the report argue that the that the State of the Environment is improving in Canada and that therefore the strong actions proposed by the Committee are not required. The Committee's proposals to place greater emphasis on the intrinsic properties of substances in assessments of their "toxicity" for the purposes of CEPA, as opposed to traditional, risk assessment models, has been the target of attacks as well.

2) The State of the Environment

Contrary to the self-serving "optimism" of major industrial polluters, the environmental crisis continues to worsen. Even as many in industry and government want to perpetuate the myth that the crisis is past, growing evidence points to worsening environmental impacts from global warming and devastating human health effects from widespread toxic chemical contamination.

i) Climate Change

An abundance of evidence indicates that the impact of global climate change continues to worsen in Canada. For example, levels of carbon dioxide in the atmosphere have reached concentrations that are more than 25 percent higher than at any levels found in the 220,000 years of the earth's recorded atmospheric history. Off Newfoundland, there are an unprecedented 1,700 icebergs -- more than three times the usual number. This past summer was the second worst year in Canadian history for forest fires, which consumed nearly seven million hectares from Yukon to Quebec and cost nearly a quarter billion dollars to fight. Globally, and in Canada, insurance claims due to natural disasters in the 1980s were tenfold greater than in the 1960s and there is every indication that claims in the 1990s will put even greater strain on the insurance industry.

ii) Toxic Substances

Growing evidence suggests that certain toxic chemicals, known as endocrine disrupters, are having devastating impacts on sensitive human and wildlife hormonal systems. When results of numerous wildlife studies are compiled and compared, a common theme emerges: functions controlled by hormones have gone awry and some synthetic compounds have now been shown to disrupt endocrine function in the body. Observed effects in both wildlife and humans range from decreased immune system functioning, hermaphroditism and birth defects, spontaneous abortions, reduction in gonad size at puberty, uterine and breast cell proliferation, change in steroid hormone production, enlarged livers and thyroid glands, change in egg production, and a decrease and/or change in sperm

production.

A group of scientists from around the world, headed by Dr. Theo Colborn, met at Wingspread, Wisconsin in 1991 to share findings on the effects of chemicals on wildlife and human health. Much of the evidence was gathered from the Great Lakes ecosystem. They reached the following consensus:

> "We are certain of the following: A large number of man made chemicals that have been released into the environment, as well as a few natural ones, have the potential to disrupt the endocrine system of animals, including humans.... We estimate with confidence that: Unless the environmental load of synthetic hormone disruptors is abated and controlled, large scale dysfunction at the population level is possible."

In their 1995 report on the State of the Great Lakes, Environment Canada, and the United States Environmental Protection Agency reached a similar conclusion:

> "a potential new problem in the Lakes, namely certain chemicals, such as some pesticides, which mimic hormones in aquatic organisms and humans."[3]

The report also commented on:

> "the suable but serious hazard pose by some of these chemicals through hormonal and other effects."[4]

In Canada, these effects on wildlife populations are already evident. The St. Lawrence River beluga population is considered by scientists to be among the most polluted mammals on the planet. Beluga whales in the St. Lawrence estuary carry levels of organochlorine contaminants that are 10-50 times higher than belugas in the Arctic. A study of the St. Lawrence population revealed that over twice as many female belugas were not breeding compared to females in the Arctic population. In addition, lesions were detected in mammary glands of 36% of the St. Lawrence females which would have seriously affected their ability to feed if any calves were produced.

Other fish and bird populations are showing equally disturbing effects. Biologists at Guelph University have noted that all Great Lakes salmon over two years old have enlarged thyroids -- some are over a million times their normal size and at the point of rupturing. Almost all the salmon examined have hermaphroditic reproductive systems. The herring gull population experienced a crash in the 1960s due to eggshell thinning caused by organochlorine compounds such as DDT. A ban on DDT and PCBs solved these problems, but more subtle effects still persist. Biologists now observe female gulls sharing nests with other females, male young with feminized reproductive tracts and behaviourial changes in males characterised by a lack of interest in females.

Human populations are not immune from the health effects linked to environmental toxins. Numerous recent studies have correlated a range of disturbing health effects in human with chronic

exposures to toxic substances at levels commonly found in the environment:

- Studies in 1985 and 1993 found newborns whose mothers regularly consumed Lake Michigan fish were slightly pre-term, had lower birth weights, smaller skull circumferences, and cognitive, motor and behaviourial deficits at birth and at 4 years of age compared with children whose mothers did not eat fish.

- A 1995 comparative study of women who ate two meals a month of Lake Ontario fish found their offspring to have a lower capacity to adapt to stress as well as decreased cognitive function.

- Four European studies in the past ten years have concluded that there has been a 50 percent decline in male sperm production and quality worldwide over the last fifty years.

- Rates of Cryptorchidism, or undescended testes in the male, have risen in Denmark and UK. No data has been collected in Canada.

- Testicular cancer rates have increased in every Canadian province since the 1960s.

There is also growing evidence that environmental contaminants play a significant role in breast cancer. In 1960 one in twenty women got breast cancer. Today, one in eight women will get breast cancer and one third of these women will die from the disease. According to the American Cancer Society, only 20 to 30 percent of breast cancer cases can be linked to established risk factors such as genetic predisposition, age at first menarche, age at first and last childbirth, total calorie intake, obesity and radiation exposure. It is well known that an increase in estrogen exposure will increase the risk of breast cancer. Many synthetic toxic chemicals found in the environment have proven to be endocrine disrupters that can have the effect of increasing estrogen exposure through a variety of mechanisms. These include the following which are produced, used, formed as byproducts or are found as contaminants within the Canadian environment:

Heavy Metals:	Cadmium, Lead, Mercury;
Organochlorines:	Dioxin, PBBS and PCBs and Pentachlorophenol;
Plasticisers and Surfactants:	Phthalates, Polycarbonates, Styrenes, Alky & Nonyl Phenol Ethoxylates;
Pesticides:	2-4-D, Aldicarb, Amitrole, Atrazine, Benomyl, Lindane, Carbaryl, Cypermethrin, Deltamethrin, Dicofol, Endosulfan, Fenvalerate, Malathion, Mancozeb, Maneb, Methomyl, Methoxychlor, Metiram, Metribuzin, Permethrin, Tributyl Tin, Trifluralin, Vinclozolin, Zineb, Ziram.

So compelling is the scientific evidence and concern surrounding the environmental and human health impacts of persistent organic pollutants (POPs) that the consensus statement reached by the International Experts Meeting on Persistent Organic Pollutants (hosted by the Canadian and Philippines governments, June 4-8, 1995, Vancouver) agreed:

> "There is enough scientific information on the adverse human health and environmental impacts of POPs to warrant coherent action at the national, regional and international level. This will include bans, phase-outs and provisional severe restrictions for certain POPs."

Canada has a clear interest in being a world leader in implementing a precautionary environmental policy and regulatory regime to address the problem of POPs, both nationally and internationally. Regardless of where POPs originate, atmospheric circulation patterns facilitate the long range transport to and accumulation in areas at cooler latitudes. Contamination by toxaphene, PCBs, and dioxin is now generally much higher in the northern lakes of Canada than those further south and, unlike southern lakes, concentrations in Canada still seem to be increasing. Toxic heavy metals, such as mercury, although not persistent organic compounds, are also found at elevated levels.

3) The Precautionary Approach, Risk Assessment and "Sound Science"

i) CEPA and Risk Assessment - the Committee's Recommendations

The Committee's recommendations regarding the assessment of substances for "toxicity" under CEPA are clearly its most controversial. Its recommendations are intended to deal with serious problems which emerged in PSL assessment process under the Act. These include:

- the failure to reach conclusions regarding the "toxicity" of 13 of the 44 substances on the PSL and subsequent removal of these substances from the PSL by the Ministers of Health and the Environment;
- the time taken to complete assessments of substances on the PSL (5 years); and
- the consideration that several substances on the PSL were found to have "toxic" properties, but were found to be not "toxic" or no conclusion regarding "toxicity" was reached for purposes of CEPA.

The PSL evaluations were conducted under CEPA using a risk-based model of hazard x exposure. Under such a model, the intrinsic capacity of a substance to cause harm is multiplied by the likelihood of exposure occurring in a sufficient quantity to cause harm. However, this approach to the assessment process was the subject of extensive criticism from a variety of stakeholders who appeared before the Committee. Many stakeholders, particularly among those who are asked to bear environmental and occupational risks associated with the manufacturing, use, generation or lease of

potentially harmful substances, take the view that the risk-based model contains assumptions which tend to minimize the apparent risk associated with a given activity.[5]

Within the CEPA assessment process, it is apparent that some weaknesses exist in the hazard assessment component of the evaluation process. Most notably, there was often a narrow focus on the acute toxicity and carcinogenic potential of substances, while other potential toxic effects were ignored. This focus tended to reflect the degree to which the existing toxicological data on substances addresses acute toxicity and carcinogenic potential. However, it fails to consider other potential toxic effects, such as the recent findings regarding the effects of certain substances on the immune system, and the growing evidence of capacity of others to act as endocrine disrupters.

It is evident, however, that the most serious problems in the CEPA assessment process occurred in the treatment of the exposure component of the risk equation. In some cases, such as with Toluene, which is widely regulated in Canada for occupational health and environmental protection purposes, findings of not "toxic" were based on assessments of exposure to general population, while the potential effects of acute accidental or occupational exposures were ignored.

In other cases, such as used crankcase oil and creosote waste products, substances found to have "toxic" properties were not found to be toxic for the purposes of CEPA due to lack of a formal study providing conclusive exposure data demonstrating presence in the Canadian environment in quantities sufficient to cause harm. This was despite the availability of substantial informal evidence of significant releases of this substance into the environment.

This approach to the issue of exposure results in a fundamentally reactive structure, which effectively requires absolute proof that a substance is causing harm in Canada before it can be declared "toxic" for the purposes of CEPA. It is for this reason that the Standing Committee sought to place more emphasis on the hazard side of the risk equation in its recommendations. This would permit a more precautionary approach, so that where a substance is found to have a significant potential to cause harm to human health or the environment, preventative action can be taken without the need for absolute proof of its presence in the Canadian environment in sufficient quantity or concentration to cause harm.

Furthermore, the testing all toxic, persistent and bioaccumulative compounds is not feasible. For instance at least 11,000 organochlorines are produced commercially. Many thousands more are created as by-products during the manufacture, use and disposal of these initial 11,000. If nothing else the cost is prohibitive. For example in 1987 the cost of a minimal study of the effects of a mixture of 25 common toxic chemicals was estimated at U.S. $3 trillion.[6] For some organochlorines, such as dioxins, studies suggest that there is no threshold below which no effects occur. For such chemicals as well as those known to be persistent, risk assessment and toxicological testing directed towards establishing acceptable rates of release and exposure are exercises in futility.

ii) Increasing International Adoption of Precautionary Approaches to Persistent Toxic Substances

An international conference on Male Reproductive Health and Environmental Chemicals with Estrogenic Effects was held in Denmark last year. The international scientists noted the limitations of current risk assessment and recommended the following:

> "At present, tens of thousands of man-made chemicals are used, yet the effects on the endocrine system have been studied for only a few of these...(and) the estrogenic activity of most chemicals has been detected by accident, not by intent: that is, no systematic screening has been attempted. Current toxicity tests are designed primarily to detect overt reproductive effects or toxicity in the adult -- they have not been designed to seek out effects where there is a long time phase. Moreover, unless such changes were pathological they would probably be dismissed as insignificant... Based on what we know regarding exposure during fetal development it is possible there are other adverse health effects of which we are currently unaware e.g. permanent changes to the immune system, growth, etc."

They further added:

> "There is inadequate data on the level of actual human exposure to these chemicals which means that no accurate risk assessment can be made. Determination of whether environmental estrogens do exert harmful effects in man will probably have to rely on weight of evidence rather than establishment of precise cause and effect."

This consensus view was mirrored at the recent Vancouver meeting of international experts on Persistent Organic Compounds:

> .... "It must be recognized that where it is not possible to completely quantify risk due to the lack of suitable toxicological or other end points, risk management decisions should based on qualitative understanding of the risk...National government must focus on the objectives to phase-out POPs and reallocate existing internal priorities and resources to demonstrate their commitment."

The Precautionary Approach, originally advocated by the German government at the First North Sea Conference in 1984 has now been agreed as the way forward by the eight European nation states that border the most industrialized sea in the world. In June this year they agreed that:

> "The guiding principle for achieving the prevention of pollution by hazardous substances is the precautionary principle. This implies the prevention of the pollution of the North Sea by continuously reducing discharges, emissions and losses of hazardous substances thereby moving towards the target of their cessation within one generation (25 years) with the ultimate aim of concentrations in the environment

near background values for natural occurring substances and close to zero concentrations for man-made synthetic substances."

"Hazardous substances are defined as substances, or groups of substances, that are toxic, persistent and liable to bioaccumulate. In this definition toxicity should be taken to include chronic effects such a carcinogenicity, mutagenicity and teratogenicity and adverse effects on the function of the endocrine system."

The European Ministers further agreed to pursue the development and use of clean technology for production processes, to give priority to the development of environmentally sound products taking into account the whole life cycle of substances or products and to substitute the use of hazardous substances by less-hazardous substances or preferably non-hazardous substances where these alternatives are available.

iii) Bans and Phase Outs of Persistent, Bioaccumulative Toxic Substances: IJC Recommendations and Liberal Party and Government of Canada Policies

The Committee's recommendations regarding the deeming of sunsets for DSL Persistent, Bioaccumulative and Toxic substances (PBT's) (**Recommendations 13-17, 21, 24-27**) also prompted a great deal of controversy. In general, the Committee's recommendation is consistent with the direction of government's recently released Toxic Substances Management Policy (TSMP), the recommendations of the Canada-U.S. International Joint Commission in its 5th, 6th and 7th Biannual Reports, and recent developments at the international level towards very strong action on PTB substances. It is also consistent with the commitment made by the Liberal Party of Canada in its 1993 election platform Creating Opportunity which stated:

> "Timetables must be set for phasing out all uses of the most persistent toxic substances (pg. 66)."

This is due to the extremely serious nature of the environmental and human health effects of PTB substances. In the long term, it seems likely that all substances with these characteristics will be banned or phased-out world-wide.

iv) Bans and Phase-outs of Persistent Toxic Substances in other OECD Jurisdictions: The Case of Sweden

The Swedish economy has managed to remain stable and profitable even with the Swedish government's program on chemical sunsets, which is based on a rigorous testing protocol and consideration of economically feasible substitutes. It is interesting to note that some of these compounds are used widely in Canada (pesticides: Atrazine, Endosulfan, Trifluralin) while other are extracted here (Lead) and still others have never been targeted for assessment (Nonyl Phenol

Ethoxylates). The first draft of the June 1994 *Canada-Ontario Agreement Respecting the Great Lakes Ecosystem* (COA) included the listing of Endosulfan and Trifluralin. However, they were subsequently dropped after heavy lobbying by AgCare (Agricultural Groups Concerned About Resources and the Environment) and the Ontario Corn Producers Association. This came to public light when the final COA document was signed in July, 1994. Although a review of these pesticides had been promised, they are not included on current COA chemical assessments. All three pesticides are suspected endocrine disrupters.

Toxic substances being phased out in Sweden

TETRACHLOROETHYLENE, TRICHLOROETHYLENE and METHYLENE CHLORIDE

- banned for private use from 1 January 1993. After 1 January 1996 products containing methylene chloride or trichloroethylene may not be sold or used by industrial users.

ORGANIC SOLVENT-BASED PAINT

- In 1987, the Painters' Union and the Swedish Federation of Painting Contractors agreed that paint based on organic solvents may only be used in exceptional cases. This has resulted in a rapid transition to water-based paints and lacquers, although the transition for household use has not been as complete.

LEAD

- A parliamentary decision from 1991 sets the goal that all uses of lead shall be phased out. Lead in batteries, shots, crystal, paint, and underground pipes is currently being reduced through different measures. Lead additives in petrol have been banned since 1 March 1995.

MERCURY

- A parliamentary decision from 1991 states that all uses of mercury should be eliminated in the long term. Thermometers containing mercury have been banned since 1 January 1993. Mercury in strip lighting and in dental fillings is gradually being phased-out.

CADMIUM

- Only permitted for use in certain batteries. Bans exist for its use in surface treatment, as stabiliser and colouring agent. Products that have been surface-treated with cadmium are not allowed to be imported. Common consumer batteries (LR 03, 6, 14 and 20) must not contain more than 0,025 % cadmium by weight. Fertilisers must not contain more than 100gms cadmium per tonne.

ORGANOTIN COMPOUNDS

- All uses are to be phased out as soon as possible, according to a parliament decision in 1991. Anti-fouling products containing organotin compounds have been forbidden for smaller boats (less than 25 m length) since 1993. Other uses are targeted for formal restrictions.

CHLORINATED PARAFFINS

- A goal was adopted by parliament in 1991 to phase out short chained paraffins with a high chlorine content before 1995. According to the same decision, all chlorinated paraffins shall be phased out before the year 2000.

PESTICIDES

- 69 active ingredients have been banned for use in pesticides. These include: Aldicarb, Aldrin, Atrazine, Bifenthrin, Bromacil, 2,4-D, Daminozide, Dieldrin, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, Dinocap, Dinoseb, Ethylene Oxide, Carbaryl, Metoxuron, Sodium Chlorate, Thiram, Trifluralin and Ziram.

NONYL PHENOL ETHOXYLATES

- A decision was taken by parliament in 1991 to phase out most uses by the year 2000. The use of Nonyl Phenol Ethoxylates as institutional cleaning agents was to be reduced by 90% between February 1989 and January 1991. For major industrial uses of Nonyl Phenol Ethoxylates, the target is a reduction of 90% by the year 2000. This decision was taken before Nonyl Phenols were recognized as highly estrogenic substances.

PVC

- Further restrictions are under consideration after recommendations from a governmental advisory group in 1994 to phase out all soft PVC, and rigid PVC containing hazardous stabilizers, before the year 2000. Sweden is also actively promoting restrictions on PVC within the European Union.

CHLORINE BLEACHING OF PULP

- The use of chlorine gas has been phased out in the Swedish industry, due to its environmental effects. Chlorine dioxide is still being used, but totally chlorine free (TCF) techniques are increasing rapidly.

HCFCs

- Forbidden for aerosols, refrigerants and insulation since 1 January 1994.

4) Conclusions

The Committee's recommendations for strong action towards the phase-out of persistent toxic substances are also consistent with the growing consensus on the need for action with respect to such substances in the scientific community, the recommendations of the International Joint Commission in its 5th, 6th and 7th Biannual reports, and the actions of the European Union and an increasing number of individual OECD nations. Similarly, its recommendations regarding pollution prevention planning for all substances found to be "toxic" for the purposes of CEPA are consistent with the direction already taken in many U.S. states. These programs have resulted significant environmental and economic benefits.

III. THE STANDING COMMITTEE'S RECOMMENDATIONS AND CANADIAN COMPETITIVENESS

1) Introduction

A major component of the attack on the Standing Committee's report put forward by critics both within and outside of government is the argument that it will negatively affect Canada's competitiveness. These positions reflect economic perspectives rooted in the past, and ignore the growing consensus regarding the potential convergence between pollution prevention, environmental protection and economic efficiency.[7] In a recent paper published in the Harvard Business Review, Professors Michael Porter of Harvard University and Claas van der Linde of St. Gallen University commented on the relationship between strong environmental programs and good economic performance, and demonstrated the experience of Germany, Japan and other jurisdictions.[8] They noted:

> "(The) static view of environmental regulation, in which everything except regulation is held constant is incorrect. If technology, products, processes and customers' needs were all fixed, the conclusion that regulation must raise costs would be inevitable. But companies operate in the real world of dynamic competition, not in the static world of much economic theory. They are constantly finding innovative solutions to pressures of all sorts, from competitors, customers and regulators.
>
> "Properly designed environmental standards can trigger innovations that lower total cost of a product or improve its value. Such innovations allow companies to use a range of inputs more productively - from raw materials to energy to labour - thus offsetting the costs of improving environmental impact and ending the stalemate. Ultimately, this enhanced *resource productivity makes companies more competitive, not less.*"[9]

2) Bans and Phase-Outs PBT Substances

Specific concerns have been raised regarding the impact of the Committee's proposals regarding the ban or phase of PTB substances on the competitiveness of Canadian industry. However, the situation with respect to PTB's can be viewed in a different manner. The global movement towards the ban or phase-out of PTB's presents Canadian industry with an opportunity to gain competitive advantage by moving ahead of this global trend and developing and demonstrating viability of alternative products before others do.

It would be clear that new substances which are toxic, persistent and bioaccumulative are unlikely to be approved for manufacturing or use in Canada, and that those substances with such characteristics already in use are targeted for timely phase-out, appropriately in light of their widely acknowledged environmental and health effects. This would provide a clear, long-term signal to

industry regarding investment in the development or manufacturing of substances with such characteristics.

Numerous studies indicate that jurisdictions with the most stringent environmental requirements tend to have the strongest environmental industry sectors.[10] Environmental regulation and the anticipation of stricter environmental policies stimulates the innovation and diffusion of pollution prevention and resource conserving technologies and skills.[11] In addition, it has been observed that domestic standards which anticipate international trends can be particularly beneficial, as they can assist in giving domestic environmental firms a lead in developing products and services which will be valued in other markets.[12] Conversely, it also has been noted that jurisdictions which lag behind competing jurisdictions, in environmental requirements, often lose their domestic environmental services' market to foreign suppliers.[13]

Furthermore, a study commissioned by the Pollution Probe Foundation concluded that the economic benefits of the virtual elimination of persistent toxic chemicals from the Great Lakes Region would likely exceed the costs by a significant margin.[14]

3) Pollution Prevention Planning

Concerns also apparently have been raised regarding the Standing Committee's proposals regarding pollution prevention planning for CEPA toxic substances (**Recommendation 31**). Pollution prevention planning requirements have been established by more than 20 U.S. states, and the economic impact of these programs has been strongly positive.

i) The Massachusetts Experience

One of the most successful U.S. state programs has been under the Massachusetts *Toxic Use Reduction Act* (TURA). A recent analysis of 29 firms applying for the annual Governor's Awards in Toxics Use Reduction found that in aggregate they had eliminated the use of 2,870 tons of toxic chemicals, reduced 750 tons of hazardous wastes and saved $44 million per year.

TURA only mandates *planning*, not actual realisation of the plan. However results show that once a company carries out total cost accounting and a mass balance audit of all chemicals used, the discovery of cleaner technology options prove not only safer for workers and the environment but also profitable to the company.

TURA sets a State wide Goal of 50% reduction (1987-1997) in Waste Generation through Toxic Use Reduction. This was agreed and passed into law in 1989 by a unanimous vote of the legislature after months of negotiation between the business community and public interest groups. The law uses toxics use reduction as its primary tool to reduce industrial pollution and enhance the competitiveness of Massachusetts enterprises.

The TURA Program is highly cost effective. If operates on a budget of roughly $4.3 million per year all generated from the User Fees. Firms pay annual fees based on size and number of reported chemicals. The chemical fee is $1,100 per listed toxic chemical reported plus a facility fee that ranges from $1,850 to a maximum of $31,450. The industrial community in Massachusetts agreed to this levy because all revenue is used to directly help them profitably reduce toxic byproducts and use.

Massachusetts firms have cut their toxic waste by 17.7 million pounds or 14.5% between 1990 to 1993. These firms plan to generate 23% less waste in 1998. Toxic chemical use has fallen 6% between 1990 and 1993. Of the 560 facilities that expect to file reports in 1998, 58% have already reduced the use of one or more chemicals below the reporting threshold, or plan to do so by 1998. 93% of firms complied with reporting requirements, 80% of firms reported the planning exercise was useful, and 92% planned to implement at least part of their plan.

The Massachusetts experience is similar to that experienced in other states. In a report released in June regarding the New Jersey *Toxics Use Reduction Act* it was concluded that the savings typically achieved by regulated firms as a result of the program exceeded the costs of compliance by a wide margin.

4) Recent Studies on the Economic Impact of Environmental Regulation in Canada

Apogee Research Inc/Ontario Ministry of Environment and Energy

This report, commissioned by the Ontario Ministry of Environment and Energy, concluded that "future regulatory impacts on industrial productivity are likely to be small." It further found that if the most stringent regulatory scenarios are imposed for both the Province's Municipal-Industrial Strategy for Abatement (MISA) and Clean Air Program (CAP) the negative impact would be less than 2%. It stated that "such changes are dwarfed by normal cyclical fluctuations in productivity." The study focused on the affected industry sectors, such as pulp and paper, iron and steel, and petroleum refining. It did not take into account the economic benefits to competitiveness brought about by new technologies resulting from the regulations.[15]

Compas Research Mining Association of Canada Study

In a March 1995 survey among opinion leaders in government, business, academe, the media and non-governmental organizations, for the Mining Association of Canada and the Canadian Mineral Industry Federation, 44% of respondents agree that "not only will business learn to profit from environmental protection, but these changes will actually help to boost the economy. 25% believed that environmental protection would not have an impact on economic growth, and only 20% believed that it would slow down the economy. 82% of respondents agreed with the statement that: "the real environmental problem is the resistance of some business leaders to working on environmental solutions."[16]

KPMG Environmental Management Survey

In this 1994 survey of Canadian business leaders, 95% responded that compliance with regulations was their primary motivation for the establishment of environmental management systems within their firms. Voluntary government programs were only cited as a motivating factor by 16% of respondents.[17]

5) Ecological Tax Reform

Notwithstanding their concerns over the potential costs of the implementation of the Standing Committee's report, the Committee's critics both within the federal government and within industry, seem remarkably unconcerned about other forms of federal expenditures which affect the environment.

In a letter sent to the Chair of the Task Force on Economic Instruments and Disincentives to Sound Environmental Practice, Jim MacNeill, former director in OECD, with the Brundtland Commission, Ontario Hydro and the IISD resigned over the task force's unwillingness to deal with crucial issues of government subsidies to industries based in natural resource extraction.

He emphasized that the task force had repeatedly failed to reform the current use of economic instruments and to do so in "positive" ways that improve both economic and environmental performance:

> "I am most disturbed, by the almost total failure of the report to address the current widespread negative use of such instruments in the form of subsidies and tax expenditures that perversely encourage unsustainable forms of development in energy, agriculture, forestry, fisheries, water, mining and other areas.
>
> "They have been deployed historically by both federal and provincial governments, as you know. At the federal level where the Task Force decided to focus, they are enormous in size and scale, burdening the budget with billions every year. Studies by OECD, the World Bank and many prestigious institutes around the world have shown that subsidies and tax brakes of various kinds in the energy sector, for example, usually tilt the playing field in favour of fossil fuels. they penalize efficiency and renewables and result in more acid rain and global warming.
>
> "....The subsidies and tax expenditures represent perhaps the strongest barrier and greatest disincentives to more sustainable forms of development in Canada....The government cannot and in my view, will not achieve the commitments it undertook in Rio and has reconfirmed many times since, both to stabilize CO2 emissions and to protect biodiversity as long as it continues to pay out billions in production-tied subsidies and in tax expenditures. yet the report fails to address them. Worse, the

report will not even include the best available estimated on levels of federal subsidies and tax expenditures in each sector over the past five years, even though the Task Force was told that the figures are readily available.

"...Energy subsidies and tax expenditures can be reduced at great savings to the taxpayer and new incentives can be provided in ways that not only advance energy security but encourage renewables and a steady increase in energy efficiency.

"Moreover, far from being a drag on the economy, these reforms could relieve public budgets of an enormous burden...In fact, those countries that have achieved the most progress in these directions are at the top of the international league of economic performers.

"...The Task Force includes employees of a large number of national associations and interest groups whose members benefit from the subsidies and tax expenditures that are partly in question. They come mandated to represent their associations and one cannot reasonably expect them to entertain any recommendations that would reduce their subsidies and tax breaks. Even recommendations to redeploy these expenditures in other ways would require that they first be recognized for what they are and that the report include available estimates of their size and magnitude. Some are not prepared to do even this and given the consensus rules accepted by the Task Force, that ends the matter."

Ecological Tax Reform is currently being seriously analyzed in many European countries. In a recent European White Paper on "Growth, Competitiveness and Employment", the EU discusses "reducing labour costs through increased pollution charges" as a key part of a "new model of economic development." Global industry, represented by the Business Council for Sustainable Development, has also started to call for a shift of taxes away from "value-adding activities such as labour and capital, and onto value-depleting activities, such as overuse of environmental resources."

A study prepared by the influential German Economic Research Institute (DIW) showed that a unilateral ETR programme that raised energy prices by 7% per year for 15 years, and recycled the revenues to industry and households, would not damage competitiveness. At the same time, it would cut energy consumption by 21%, create over half a million jobs and favour lower incomes.

6) Conclusions

The critics of the Committee's recommendations have failed to provide any specific evidence of how the implementation of the Committee's recommendations would negatively affect the competitiveness of Canadian industry. What evidence exists suggests that the economic impact of a well-designed implementation program would be neutral to positive. Indeed, given the

international trend towards the phase-out of persistent toxic substances, and to strengthen controls on toxic substances generally, there may be significant competitive advantages to be gained in the development of alternative processes and products. More broadly, the attacks on the Committee's report ignore the strong linkages which have been made between pollution prevention, eco-efficiency and enhanced competitiveness over the past few years.

IV. FEDERAL-PROVINCIAL RELATIONS

1) Introduction

The Standing Committee's recommendations recommendation regarding CEPA have been portrayed as proposing a "massive" federal intrusion into provincial jurisdiction over the environment. In fact, as is well known, jurisdiction for environmental protection in Canada is shared between the federal and provincial governments. The Committee's recommendations are all well within the jurisdictional capacity of the federal parliament.

2) Federal Jurisdiction and the Environment

A strong consensus has emerged over the past quarter century among legal and constitutional scholars that the federal government has consistently under-exercised jurisdictional capacity in the environmental field. This view has been upheld by the Supreme Court of Canada on numerous occasions, most notably in the 1988 *R. Crown Zellerbach Canada* and 1993 *Oldman Dam* decisions. Particular attention should be given to the national concern/provincial incapacity tests established through these and other decisions for the federal government's use of its capacity to legislate for the Peace Order and Good Government of Canada in relation to the environment. Federal jurisdiction over criminal law, fisheries and sea coasts, navigation and shipping, agriculture, trade and commerce, and the census and statistics provide additional sources of federal jurisdictional capacity over the environment.

3) The Impact of the Standing Committee's Recommendations

Federal Jurisdiction

The bulk of Committee's recommendations deal with matters under the jurisdiction of the federal government, and would therefore have no impact on provincial jurisdiction. These include:

- environmental protection on federal lands, and in the operations of federal government agencies (**Chapter 11**);
- the role of First Nations in environmental protection (**Chapters 12 and 13**);
- the control of ocean dumping (**Chapter 7, Recommendations 47-59**);
- coastal zone management (**Chapter 7, Recommendations 60-64**);
- transboundary movements of municipal solid and hazardous wastes (**Recommendations 83 and 84**);

- transboundary air pollution (**Recommendations 77-79, Recommendation 82**);
- radioactive substances (**Recommendation 76**); and
- the administration of the federal *Fisheries Act* (**Recommendation 140**).

Other recommendations made by the Committee suggest the updating of federal standards in areas, such as the discharge of nutrients into surface waters (**Recommendations 65-67**), and motor fuels and vehicle emissions (**Recommendations 70-72**), where federal standards have been in place have for more than twenty years. In some cases changes are required to fulfil Canada's obligations under international agreements.

New Substances and Biotechnology Products

The Standing Committee's recommendations would strengthen the federal government's role with respect to the assessment of substances new to Canada (**Chapter 5**), and Biotechnology products (**Recommendations 68 and 69**). However, in both cases, it is unlikely that the provinces acting individually or collectively could provide effective environmental and human health protection in these areas, as the failure of one province to establish an adequate assessment process for such products could threaten environmental quality in other provinces. In fact, these areas provide a classic illustration of the "provincial incapacity" test established by the Supreme Court of Canada in its 1988 *R. v. Crown Zellerbach Canada* decision with respect to parliament's capacity to legislate for the "Peace, Order and Good Government of Canada.

CEPA "Toxic" Substances and National Standards

The Committee's recommendations would also strengthen the federal role through the establishment of environmental standards for new and existing substances found to be "toxic" for the purposes of CEPA (**Chapters 5 and 6**). Such standards would provide baseline environmental requirements with respect to the most serious environmental contaminants in Canada. This is essential to the federal government's capacity to provide a minimum level of environmental quality to all Canadians through the existence of such standards.

The provinces would continue to be able to set environmental standards higher than the federal standards for CEPA "toxic" substances if they choose to do so. The Committee has also recommended that the provisions of CEPA which are intended to ensure an efficient interface between federal and provincial requirements, such as administrative and equivalency agreements, continue albeit with strengthened public accountability mechanisms (**Recommendations 137-140**).

The establishment of such standards by the federal government is based on several federal heads of power under the *Constitution Act*. These include the federal government's capacity to legislate with respect to: criminal law for the protection of public health; trade and commerce; agriculture; and "national concerns" through Parliament's capacity to legislate for the "Peace, Order and Good Government of Canada."

4) Conclusions

Sustainable development in Canada will require federal leadership on national and international environmental issues. There must also be effective environmental protection within federal jurisdiction, federally-established minimum national standards in areas of national concern such as toxic substances, products of biotechnology, and activities which pose transboundary threats to the environment, and continued federal leadership in environmental science.

V. THE CEPA REPORT AND EXISTING GOVERNMENT POLICY

1) Introduction

One of the major criticisms being levelled at the Committee's report is that it makes recommendations which depart from existing government policy. This attack is, for the most part, moot, as the Committee's mandate, provided through s.139 of CEPA, provides for review of federal policies related to the administration and implementation of CEPA. Secondly, the Committee's recommendations are, in fact, generally consistent with the direction provided through existing Liberal Party and government Policies, notably the 1993 Red Book platform, the February 1995 Budget Plan, and the June 1995 Toxic Substances Management Policy and Federal Pollution Prevention Strategic Framework.

2) Creating Opportunity - The 1993 Liberal Party Election Platform

The Liberal Party of Canada's 1993 Platform made the following commitment with respect to the CEPA review and toxic substances:

> "In the past, environmental policy has focused on managing and controlling the release of pollutants entering the environment. This approach has had only limited success. Canada needs a new approach that focuses on preventing pollution at source. *Timetables must be set for phasing-out the most persistent toxic substances.* Manufacturing innovations are needed to avoid the use or creation of pollutants in the first place; for example, through raw material substitution or closed loop processes that recycle chemicals within the plant. There is no alternative if Canadians wish to stop long-term toxic pollutants from entering our air, soil and water. A Liberal government will use the upcoming five year review of the Canadian Environmental Protection Act to make pollution prevention a national goal and to strengthen the enforcement of federal pollution standards."(p.66).

These themes are carried forward in the Standing Committee's report's recommendations regarding the phase-out of persistent, bioaccumulative substances (**Recommendations 14-17, 24-27**), and pollution prevention planning (**Recommendation 31**), and environmental law enforcement (**Chapter 15**).

3) Toxic Substances Management Policy - June 1995

This policy, released by the government in June 1995, committed the government to the "virtual elimination" of predominantly anthropogenic substances which meet established criteria for persistence, bioaccumulation and toxicity. "Virtual elimination" was defined in the policy as "no detectable release to the environment." The Standing Committee's recommendations would

incorporate key elements of the policy into law (**Recommendations 14-17, 21, 24-27**).

4) Pollution Prevention: A Federal Strategy for Action June 1995

This policy, released by the government in June 1995, defined pollution prevention as "the use of processes, practices, materials, products or energy that *avoid* or *minimize* the generation of pollutants and waste..." and stresses processes changes to "eliminate the causes of pollution" (pg.3). This is the definition of pollution prevention adopted by the Standing Committee (**Recommendation 3**). The federal strategy also committed the government to "incorporating pollution prevention into federal legislation" (p.7). The Standing Committee's recommendations regarding pollution prevention planning would fulfil this commitment (**Recommendation 31** and elsewhere).

5) The 1995 Federal Budget Plan and Cost Recovery

The Standing Committee makes significant recommendations regarding cost recovery in relation to new and existing programs under CEPA (**Recommendations 35, 52, 122, and 123**). This approach is consistent with overall government policy regarding the recovery of costs for programs and services by departments (1995 Budget Plan, pp.40-41). It also follows the polluter pays principle, which has been accepted within the OECD for more than twenty years. In addition, it should be noted that the notion of departments collecting approval and service fees is far from unprecedented. Environment Canada, for example, has collected fees in relation to Ocean Dumping Permits for many years.

With respect to the question of the dedication of fees collected by Environment Canada to environmental purposes, it would be noted that public opinion polls taken over the past few years have indicated that charges dedicated to environmental purposes appear to be one of the few forms of new revenues that public is prepared to accept. Furthermore, various forms of dedicated environmental charges are widely employed by the United States federal and state governments, and most other members of the OECD.

The Committee's recommendations also contain a number of proposals which might result in significant savings to the government. The increased focus on intrinsic properties of substances in the assessment process would reduce the need for extensive, and difficult and expensive to obtain exposure data to establish the status under CEPA of substances with toxic properties. The Committee's proposals would also permit the use of data from other OECD jurisdictions to establish the "toxicity" of substances for the purpose of CEPA, eliminating the need for Canada to repeat costly and time-consuming assessment processes.

In a broader context, the Committee's report identifies a number of structural gaps in the existing federal environmental legislative and policy framework. These include such issues as coastal zone

management (**Chapter 7**), environmental protection within the federal government itself (**Chapter 11**), the role of First Nations in environmental protection (**Chapter 12**), and environmental protection in the Arctic (**Chapter 13**). Although new resources may be needed to fully address these gaps, it is clear that they will have to be dealt with in some way if we are to achieve environmentally sustainable development in Canada within the foreseeable future.

The need for action in the area of coastal zone management, for example, is particularly apparent in light of the collapse and near collapse of major commercial fisheries on both the East and West Coasts of Canada. Similarly, the question of the role of First Nations in environmental protection and environmental protection in the Arctic will have to be addressed as an element of the government's efforts to move towards aboriginal self-government in Canada.

6) Conclusions

The Committee's report is consistent with the direction for environmental policy established in the federal Liberal Party's October 1993 Red Book. It is also consistent with the direction of the federal government's Toxic Substances Management Policy, its Strategic Framework for Pollution Prevention, and the elements of its 1995 Budget Plan regarding cost recovery. The Committee's recommendations are also supportive of the government's direction on improved coastal zone management, and aboriginal self government.

VI. CONCLUSIONS

The House of Commons Standing Committee on Environment and Sustainable Development's report on CEPA has provided Canada's first comprehensive federal environmental policy review since the June 1992 World Conference on Environment and Development (the Rio Conference). The Committee's report is consistent with the direction for environmental policy established in the federal Liberal Party's October 1993 Red Book. It is also consistent with the direction of the federal government's Toxic Substances Management Policy and its Strategic Framework for Pollution Prevention.

The Committee's recommendations for strong action towards the phase-out of persistent toxic substances are also consistent with the growing consensus on the need for action with respect to such substances in the scientific community, the recommendations of the International Joint Commission, and the actions of the European Union and an increasing number of individual OECD nations. Similarly, its recommendations regarding pollution prevention planning for all substances found to be "toxic" for the purposes of CEPA are consistent with the direction already taken in many U.S. states. These programs have resulted significant environmental and economic benefits.

The critics of the Committee's recommendations have failed to provide any specific evidence of how the implementation of the Committee's recommendations would negatively affect the competitiveness of Canadian industry. What evidence exists suggests that the economic impact of a well-designed implementation program would be neutral to positive. Indeed, given the international trend towards the phase-out of persistent toxic substances, and to strengthen controls on toxic substances generally, there may be significant competitive advantages to be gained in the development of alternative processes and products. More broadly, the attacks on the Committee's report ignore the strong linkages which have been made between pollution prevention, eco-efficiency and enhanced competitiveness over the past few years.

With respect to federal provincial-relations, the bulk of the Committee's recommendations deal with matters under federal jurisdiction, or where federal standards have been established for many years. In the case of the assessment of new substances, including chemicals and biotechnology products, federal processes already exist in these areas, and it would simply be irrational and ultimately ineffective for each province to establish its own assessment process.

The Committee's recommendations would also strengthen the federal role through the establishment of environmental standards for new and existing substances found to be "toxic" for the purposes of CEPA. Such standards would provide baseline environmental requirements with respect to the most serious environmental contaminants in Canada. This is essential to the federal government's capacity to provide a minimum level of environmental quality to all Canadians through the existing of such standards. The provinces would continue to be able to set environmental standards higher than the federal standards for CEPA "toxic" substances if they choose to do so. The Committee also has recommended that the provisions of CEPA which are intended to ensure an efficient interface between federal and provincial requirements, such as administrative and equivalency agreements

continue, albeit with strengthened public accountability mechanisms.

The achievement of environmentally sustainable development in Canada will require federal leadership on national and international environmental issues. There must also be effective environmental protection within federal jurisdiction, federally-established minimum national standards in areas of national concern such as toxic substances, products of biotechnology, and activities which pose transboundary threats to the environment, and continued federal leadership in environmental science. The House of Commons Standing Committee on Environment and Sustainable Development's recommendations provide the focus necessary, in a period of fiscal restraint, to achieve these goals.

APPENDIX. CANADA'S RECENT INTERNATIONAL ENVIRONMENTAL TRACK RECORD

1) Introduction

Robert Matas' story of October 16 regarding the attack of Natural Resources Canada (NRCan) and Industry Canada officials on the report of the House of Commons Standing Committee on Environment and Sustainable Development on the Canadian Environmental Protection Act (CEPA), is disappointing, but hardly surprising. Unhappily, both agencies have well-established track records of undermining federal environmental initiatives on behalf of their industrial clients.

Many Canadians recall, for example, the role played by NRCan's predecessor, Energy, Mines and Resources Canada, in efforts to weaken the previous government's Green Plan.[18] A number of more recent examples relate to the role of NRCan in efforts to weaken Canada's position on international environmental initiatives, including the Ban on exports of hazardous wastes to non-OECD countries under the *Basel Convention on the Transboundary Movement of Hazardous Waste*, the development of international protocols on heavy metal pollutants, and action on climate change.

2) Canada and the Basel Ban on the Export of Hazardous Wastes to Non-OECD Countries

Canada has taken a position against the wishes of the G-77 (most developing countries), China and Central and Eastern Europe that hazardous waste -- including waste destined for recycling -- be banned from OECD to non-OECD countries.

These countries called for this ban in March, 1994 after many so called "recycling" trade shipments were subsequently found to contain high levels of hazardous and toxic compounds. Many G-77 countries are adamant that wastes disguised as recycling only perpetuate the legacy of toxic waste shipments to their country.

They do not view the import of such substances as valuable industrial feedstocks, as termed by the International Chamber of Commerce, nor do they view this import practice as sustainable economic development.

However, rather than support this view of the G-77 and support the lead of the Nordic countries and some individual European countries to ensure a ban on all hazardous waste destined for recycling or recovery operation, Canada joined the ranks of Japan, Australia and the United States to leave the recycling loophole open.

Although there was some initial support for the recycling proposal from some European countries this caved in when the G-77 firmly held their position and it became politically untenable to oppose the wishes of 'receiving' countries. At this point Canada, the US, Japan and Australia negotiated as

much as possible to postpone the effective date and weaken the language. They succeeded in doing so by delaying the implementation date for the ban on exports of hazardous waste for recycling until 31 December 1997.

Since the decision Canada has implied that it is not 'legally binding' although Canada did join the final consensus and agree to respect the ban. However Canada and the original opponents of the ban are now focusing on the re-definition of hazardous wastes by attempting to re-define waste that is bound for recycling as non-waste, and de-listing certain hazardous wastes from the Basel definitions, particularly for recycling. At the Third Basel Convention held September, 1995 Canada, US and Australia again pressed for the technical work groups to develop a clear definition of hazardous waste. Hazardous waste categories were listed by the OECD in 1988 but in 1992 lobby groups achieved the re-categorization of a GREEN, AMBER, RED listing just prior to entry into force of the Basel Convention. This would allow through 'prior agreement" the movement of 115 "green" waste categories including such known poisons as Lead, Cadmium and Chromium.

The basis for the green listing is that such compounds can be transported and sent for recycling if they do not disperse into the environment, although the scientific justification and definition of 'non-dispersibility' was never done. There is therefore no guarantee that such wastes entering the environment will not be solubilised or become biologically active as a result of chemical change.

The greater strategy of certain OECD member states is to now pursue this re-defined listing and have this apply to non-OECD countries. In subsequent public statements by Canada's Ambassador for the Environment, the Hon. John Fraser, regarding Canada's intention to delay ratification of the Convention, until the new definitions of hazardous waste are in developed.[19]

3) Canada and The OECD Chemicals Sub Group: The Case of Lead.

NRCan is part of the Canadian government's representation at the OECD Chemical Groups Risk Reduction Programme, along with Environment Canada and Health Canada. These representatives reflect the consensus view of the Canadian government's multi- stakeholder committee. OECD countries failed in June to agree on a risk reduction programme for lead, which is one of five pilot schemes to decide the best ways to co-ordinate action on the many thousands of chemicals in commerce.

The programme on lead was the first to begin in 1993, and agreement on measures to address risks posed by the metal was expected at a meeting of Environment Ministers although the Norway and Sweden's national programme to phase out all uses of lead ran counter to other national positions. By May, two options were on the table: an OECD Council Act proposed jointly by the European Commission and the US EPA, or an action programme proposed by Canada incorporating an international voluntary agrement by the lead industry.

The discussion proved acrimonious and ended in stalemate. On one side the EPA refused to consider a voluntary agreement except as one component of an OECD Council Act. Several other countries such as Australia and Canada declined to accept a prescriptive program, claiming that quicker action could be taken at voluntary level. Canada proposed an OECD action programme, the main component of which would be a voluntary industry agreement "to promote the safe production, processing, use, recycling and disposal of lead and lead-containing products." A new International Lead Management Centre representing 80% of global primary lead production have pledged to fund voluntary programmes to assess the risks of exposure to lead on a country-by-country basis, followed by an analysis of risk reduction options.

4) Natural Resources Canada and Climate Change

In 1990 Canada made a commitment to stabilize its greenhouse gas emissions at 1990 levels by the year 2000. Five years later, Canada released its National Action Program on Climate Change - a document that does little more than establish a mechanism through which industry can take voluntary action to reduce greenhouse gas emissions.

Canada has adopted a voluntary approach even though analysis by Natural Resources Canada indicates that voluntary actions are likely to take Canada only 1/3 of the way to its stabilization goal. Moreover, the same analysis indicates that more stringent packages of measures that include regulatory and fiscal initiatives would both reduce Canada's unemployment and enhance its economic growth.

NRCan served as the chair of the multi-stakeholder process that was meant to provide input to the development of Canada's National Action Program. Throughout this process, NRCan joined industry in voicing strong support for a voluntary approach, but brought few other policies and measures to the table.

Although other stakeholders did propose 88 measures for consideration in this process, NRCan has yet to seriously consider how it might implement more than a handful of these initiatives. Even now, when it is clear that voluntary initiatives will not be enough to meet Canada's stabilization goal, NRCan is doing little to study or design (much less implement) additional measures to reduce greenhouse gas emissions.

At the international level NRCan tried to prevent Canada from supporting a call for negotiations on new commitment to reduce greenhouse gas emissions even though all countries had agreed that stabilizing greenhouse gas emissions was an inadequate response to the threat posed by climate change.

Subsidies to the Fossil Fuel Industry

At the same time that it has attempted to block action on climate change at the national and international levels, NRCan has continued to heavily subsidize the Canadian fossil fuel industry. Last year a total of $65.2 million was spent on Energy Efficiency and Alternative Energy out of a total NRCan budget of over $1.2 billion. This meagre dedication of funds reflects the true mission of NRCan, which is to support the fossil fuel industry rather than support for renewable energy and energy efficiency which would flourish in the absence of these subsidies.

Of the $1.2 billion in subsidies to the Canadian Fossil Fuel Industry over one-quarter is given for Direct NRCan staff support (1994 estimates). Economic and Fiscal Analysis worth $256.2 million is provided by the department to the industry each year. This includes financial and economic analysis of major energy projects, the negotiation of agreements with provincial and territorial governments and industry and the conduct of analyses and provision of information on the financial and investment performance of the petroleum industry.

In addition, the department provides $20.2 million in Oil and Gas International Lobby Support. This is to foster the development and efficient use of natural gas, oil and natural gas liquids to ensure their maximum contribution to the Canadian economy.

Beyond these direct subsidies, a total of $11.6 billion has accumulated in deferred taxes from fossil fuel corporations in Canada, resulting in the loss of approximately $1 billion per year in interest revenues. This is added to approximately $1 billion per year in tax expenditures to support the fossil fuel industry.

5) Conclusions

Unfortunately, Industry Canada and NRCan bring to the debates about environmental policy economic perspectives which are firmly rooted in the past, not the future. They fail to recognize the broadly accepted linkages between pollution prevention, environmental sustainability and economic efficiency, or the international trend towards the phase-out of persistent toxic substances due to their widely acknowledged environmental and human health effects. The need for action in these areas was clearly recognized in the 1993 Liberal "Red Book" platform and, subsequently, in the federal government's June 1995 Toxic Substances Management Policy and its Pollution Prevention Strategy for Action.

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Appendix E

Environmental Protection Act
Take action against toxins
Are Mr. Chretien and Ms. Copps willing to roll dice
with the health of Canadians?

ENVIRONMENTAL PROTECTION ACT

Take action against toxins

Are Mr. Chretien and Ms Copps willing to roll dice with the health of Canadians?

By PAUL MULDOON
and MARK WINFIELD

This month Prime Minister Jean Chretien and Environment Minister Sheila Copps must make their most important environmental decision to date – whether or not to take action to address toxic pollution by amending the Canadian Environmental Protection Act (CEPA), Canada's most important federal environmental law.

The government was expected to respond by mid-November to the House of Commons Standing Committee on Environmental and Sustainable Development report calling for major reforms to the CEPA.

However, a positive response to the committee's recommendations is far from certain.

Several federal departments, particularly Industry Canada and Natural Resource Canada, are waging a vigorous campaign to undermine any attempt to strengthen the CEPA, arguing that the committee's report isn't based on "sound science." It is a classic battle between the attempts of a parliamentary committee to respond to what is heard from hundreds of Canadians, and bureaucratic attempts to protect what are perceived to be industrial client's short-term economic interests.

These agencies seem to be prepared to deem any action that supports change as being based on "bad science."

Dioxins

We actually know very little of the effects of the 23,000 substances in commercial use in Canada on humans. What we do know is that some of these substances, including solvents like Perchlorethylene, pesticides such as Atrazine and Edndosulfan, preservatives like Pentachlorophenol, and by-products of industrial processes such as dioxins and furans, do not break down quickly in the environment.

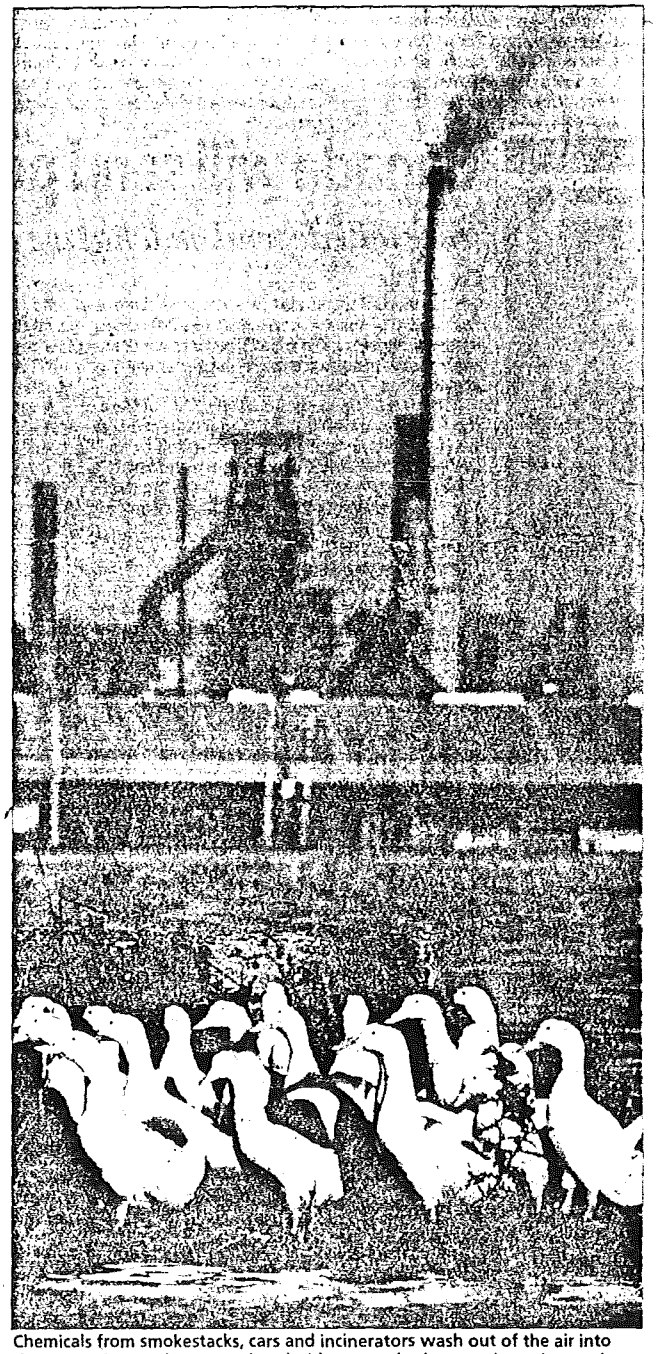
Some of these persistent substances also accumulate in fat portions of fish, wildlife and humans. As they move up the food chain, their concentrations are magnified.

Measurements of DDT, a persistent toxic substance which is now banned in Canada can, for example, be up to 100 million times higher in the tissues of herring gulls than DDT in the waters of the Great Lakes.

Substances with these characteristics have been long associated with toxic effects in fish and wildlife, such as population declines and birth defects, behavioral changes, and increased susceptibility to disease.

More recent research also suggest that some of these substances have the potential to "mimic" hormones in the bodies of fish, wildlife, and potentially humans.

These "environmental steroids" disrupt the hormone balance, and can subtly, but with serious consequence, affect the body's developmental and reproductive systems. The potential threat to aquatic organisms and humans posed by such chemical was recently recognized by Environment Canada and the U.S. Environmental Protection Agency in their September 1995 State of the Great Lakes report.



Chemicals from smokestacks, cars and incinerators wash out of the air into the water. Ottawa is expected to decide soon whether to take action against toxic pollution by amending the Canadian Environmental Protection Act.

As a result of the evidence regarding the environmental and human health impacts of persistent toxic substances in its last three biannual reports, the international joint commission, the Canada-U.S. institution that oversees the clean-up of the Great Lakes, has confirmed its earlier recommendations to the governments to phase out the manufacturing and use of persistent toxic compounds.

The federal Liberal party also recognized the need for action on persistent toxic substances and committed a Liberal government to pollution prevention legislation, and the "phase out of all uses of the most persistent toxic substances" in its 1993 "Red Book" platform.

In its 365 page report, It's About Our Health, the House of Commons Standing committee made 141 recommendations, dealing with virtually every aspect of the federal government's role in the protection of Canadians' environment.

The 30 of these which were directly related to toxic chemicals have been at the centre of the controversy over the committee's report. The committee called on the government to revamp CEPA and institute a program for the orderly phase-out of the persistent, bioaccumulative and toxic substances.

The intention is to accelerate the pace at which these substances are dealt with. In addition, the report also called upon the federal government to make the process of addressing toxic chemicals more accountable to the public by providing more information and opportunities for citizens to challenge finding of the government.

Human health

The report also calls on Ottawa to incorporate the precautionary principle into its approach to the assessment and regulation of toxic substance, so that action can be taken without waiting for absolute proof of harm to human health or the environment. It also urges that the pollution prevention principle be put into operation by requiring that companies develop pollution prevention plans for substances which are found to be "toxic" for the purposes of CEPA.

With the tabling of the committee report in June, the government was obliged under House of commons rules to respond by mid-November. The federal government response, when it comes, will be a bell weather indicator as to whether it will take its responsibilities regarding toxic substances and other aspects of environmental protection seriously.

The issue really boils down to how much data is necessary before action should be taken. The standing committee recommended, based on the weight of evidence known to date strong action is needed regarding the most toxic substances.

The departments opposing the CEPA reform, under the guise of science, seek to protect their industry constituencies and demand absolute proof of harm prior to any substantive action.

They are willing to roll the dice with the health of the Canadian public. Mr. Chretien and Ms Copps must now decide whether they are prepared to do the same.

Paul Muldoon serves as counsel for the Canadian Environmental Law Association.
Mark Winfield is director of research for the Canadian Institute for Environmental Law and Policy.

Appendix F

CEPA Government Response Score Card

Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement
517 College Street, Suite 401,
Toronto, Ontario M6G 4A2
Telephone (416) 960-2284
Fax (416) 960-9392

CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW & POLICY
25th Year 1970-1995 517 College Street, Suite 401, Toronto, Ontario M6G 4A2 (416) 923-3529 FAX (416) 923-5949

December 15, 1995 **For Immediate Release**

Industry Making Environmental Law, Not Government: Environmental Organizations Claim

Environmental organizations across Canada gave a "D" grade to the long awaited government response to the House of Commons Standing Committee on Environment and Sustainable Development's report on reforming the Canadian Environmental Protection Act (CEPA). The government response was announced today by Environment Minister Sheila Copps in Toronto.

In 1994, the Standing Committee was mandated to review CEPA, Canada's most important environmental law. The Committee tabled its report, It's About Our Health: Towards Pollution Prevention on June 15, 1995. Its massive 365 page report made 141 recommendations, calling for a virtual rewrite of the statute.

Environmental organizations described the government response as a major disappointment. "Industry and pro-industry government departments are the grinches that stole Canada's environmental opportunity. We hope the people of Canada understand that their environment and their health will continue to be at risk due to the intense lobbying by some of Canada's biggest industrial associations." noted Paul Muldoon, Counsel to the Canadian Environmental Law Association.

Mark Winfield, Director of Research for the Canadian Institute for Environmental Law and Policy added that, "in fact, some of the government's proposal would seriously weaken the existing Act, particularily, in relation to regulations to biotechnology. Under the government's proposal, CEPA would no longer set a minimum standard for environmental and human health evaluation of biotechnology products."

In particular, major disappointments in the government response included its failure to:

- require the phase-out of all persistent toxic chemicals;
- require industry to develop plans to avoid the use of dangerous chemicals;
- regulate the environmental impacts of biotechnology;
- give citizens public participation rights and effective rights to sue polluters who break environmental laws;
- deal with any recommendations on coastal zone management; and
- deal with any measures to protect biodiversity.

The government response to CEPA will be followed by a 60 or 90 day public comment period.

- 30 -

For more information, contact:

Paul Muldoon, Canadian Environmental Law Association
Telephone: (416) 960-2284 / (416) 604-1244 (home)
Mark Winfield / Anne Mitchell, Canadian Institute for Environmental Law and Policy
Telephone: (416) 923-3529 / (613) 563-2078
CEPA Review World Wide Web Site: http://www.web.apc.org/cepa911 (Accessed through INTERNET)

CEPA GOVERNMENT RESPONSE SCORE CARD

SELECTED STANDING COMMITTEE PROPOSALS	GRADE	COMMENTS
General Principles	B	
Toxic Substances	C-	
Biotechnology	F	
Citizen Environmental Rights	D	
Ocean Dumping	A-	
Coastal Zone Management	D	
International Air and Water Pollution	F	
Transboundary Waste Movement	D	
Environmental Law Enforcement	B	
Fuels and Auto Emissions	--	
Biodiversity and Ecosystem Approach	C-	
Intergovernmental Agreements	B-	
Enviromental Protection in Federal Government Operations	C-	
The North	--	
Aboriginal Issues	--	
Emergency Planning	E	

OVERALL SCORE: D

TOTAL RECOMMENDATIONS BY STANDING COMMITTEE: 141

LEGEND

GRADE	VALUE	EVALUATION	RANGE
A	90	Strong commitment to implement Standing Committee recommendations	80-100
B	75	Commitment to implement Standing Committee recommendations	70-79
C	65	Commitment to minor changes	60-69
D	55	Equivocating on implementation of Standing Committee recommendations	50-59
E	40	Recommendation rejected - No movement on present legislation	40-49
F	0	Weakens existing provisions	<40

Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement
517 College Street, Suite 401, Toronto, Ontario M6G 4A2
Telephone (416) 960-2284
Fax (416) 960-9392

CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW & POLICY
517 College Street, Suite 400, Toronto, Ont. M6C

BACKGROUNDER TO THE GOVERNMENT RESPONSE TO THE STANDING COMMITTEE ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT'S REPORT ON THE CANADIAN ENVIRONMENTAL PROTECTION ACT

The Standing Committee's Report

On June 20, 1995 the House of Commons Standing Committee on Environment and Sustainable Development delivered its report on the review of the ***Canadian Environmental Protection Act*** (CEPA). A five-year review of CEPA by the Standing Committee was mandated in CEPA when the Act was enacted in 1988. The Committee outlined a comprehensive vision of the federal government's environmental role and recommended major changes to the Act. The Committee's report, Its About Our Health! Towards Pollution Prevention - CEPA Revisited included recommendations for amendments in the areas of:

* toxic substances assessment and pollution prevention;
* the assessment and regulation of biotechnology products;
* ocean dumping and coastal zone management;
* the role of First Nations in environmental protection;
* the ecosystem approach to environmental protection;
* environmental management within the federal government;
* public participation in federal environmental decision-making; and
* federal environmental law enforcement.

The release of the government response to the Committee's report will likely be followed by a brief (two-month) consultation period, after which the drafting of amendments to CEPA will begin. It is reported that Environment Canada hopes to have a CEPA amendment package introduced into the House of Commons and pass second reading before the House rises at the end of June 1996.

The Need for A Renewed CEPA

Among the major problems which have been identified with CEPA:

* the failure to complete assessments of the "toxicity" of 13 of the 44 substances placed on the CEPA Priority Substances List (PSL) in 1988 within the prescribed 5 year time-frame;
* the finding of a number of substances known to have toxic properties and to be present in the Canadian environment, such as Toluene and Used

Crankcase Oils, not to be "toxic" for the purposes of the Act;

* to date, regulations have been put in place regarding only 3 (CFC's, chlorinated pulp effluent and PCB's) of the 26 PSL substances found to be "toxic" for the purposes of CEPA;
* despite evidence of significant environmental problems related to the activities of federal agencies, only one regulation regarding PCB's has been made under the Act's federal house in order provisions;
* an enforcement regime which has never been strong, and which now appears to be on the edge of collapse, with only 3 prosecutions being undertaken under the Act last year, resulting in a total of $8,000 in fines; and
* major gaps in the legislative framework regarding biotechnology products, the role of First Nations in environmental protection, coastal zone management and other areas.

Industry's Response to the Committee's Report

The Committee's recommendations have been met with intense opposition from some industrial sectors, particularly chemicals, petrochemicals and mining, and their positions are being strongly supported by Natural Resources Canada and Industry Canada officials. These industries are reported as opposing the Committee's recommendations that:

* greater emphasis be placed on the intrinsic toxic properties of substances in evaluations under CEPA;
* strong action be taken towards the ban or phase-out of bioaccumulative persistent toxic substances;
* pollution prevention planning requirements for CEPA "toxic" substances be established;
* the CEPA enforcement regime be strengthened; and
* the opportunities for public participation in decision-making under CEPA be expanded.

The Linkages Between the Committee's Recommendations and Other Government Initiatives

The House of Commons Standing Committee on Environment and Sustainable Development's report on CEPA has provided Canada with its first comprehensive federal environmental policy review since the June 1992 World Conference on Environment and Development (the Rio Conference). The Committee's report is consistent with the direction for environmental policy established in the federal Liberal Party's October 1993 Red Book, entitled Creating Opportunity. It is also consistent with the direction of the federal government's Toxic Substances Management Policy and its Pollution Prevention: A Federal Strategy for Action.

The Committee's recommendations for strong action towards the phase-out of persistent toxic substances are also consistent with the growing consensus on the need for action with respect to such substances in the scientific community, the recommendations of the International Joint Commission in its 5th, 6th and 7th Biennial reports under the Great Lakes Water Quality Agreement, and the actions of the European Union and an increasing number of individual OECD nations. Similarly, its recommendations regarding pollution prevention planning for all substances found to be "toxic" for the purposes of CEPA are consistent with the direction already taken in many U.S. states. These programs have resulted in significant environmental and economic benefits.

A detailed analysis is needed to determine how the government response compares to the government's previous commitments, and in particular, those environmental commitments in the Red Book.

Pollution Prevention, Environmental Quality and Competitiveness

Industry and pro-industry departments have failed to provide any specific evidence of how the implementation of the Committee's recommendations would negatively affect the competitiveness of Canadian industry. What evidence exist suggests that the impact of a well-designed implementation program would be neutral to positive. Indeed, given the international trend towards the phase-out of persistent toxic substances, and to strengthen controls on toxic substances generally, there may be significant competitive advantages to be gained in the development of safe alternative processes and products. More broadly, the attacks on the Committee's report ignore the strong linkages which have been made between pollution prevention, eco-efficiency and enhanced competitiveness over the past few years.

Federal-Provincial Relations

With respect to federal-provincial relations, the bulk of the Committee's recommendations deal with matters under federal jurisdiction, or where federal standards have been established for many years. In the case of the assessment of new substances, including chemicals and biotechnology products, federal processes already exist in these areas, and it would be irrational and ineffective for each province to establish its own assessment process.

The Committee's recommendations would also strengthen the federal role through the establishment of environmental standards for new and existing substances found to be "toxic" for the purposes of CEPA. Such standards would provide baseline environmental requirements with respect to the most serious environmental contaminants in Canada. This is essential to the federal government's capacity to

provide a minimum level of environmental quality to all Canadians through the existence of such standards. The provinces would continue to be able to set environmental standards higher than the federal standards for CEPA "toxic" substances if they choose to do so. The Committee also has recommended that the provisions of CEPA which are intended to ensure an efficient interface between federal and provincial requirements, such as administrative and equivalency agreements continue, albeit with strengthened public accountability mechanisms.

The achievement of environmentally sustainable development in Canada will require strong federal leadership on national and international environmental issues. This would include effective environmental protection within federal jurisdiction. Minimum national standards must be established in areas of national concern such as toxic substances, products of biotechnology, and activities which pose transboundary threats to the environment. Also there must be continued leadership from the federal government in area of environmental science. The Standing Committee's recommendations provide the focus necessary, in a period of fiscal restraint, to achieve these goals.

Score Card on the Government Response

Attached is the Environmentalists' Score Card that provides a preliminary review and analysis of the government response. A legend is provided to indicate how the scoring was conducted. The Score Card compares the Standing Committee's report to what is found in the government response.

For more information or comments:

Mark Winfield, Director of Research
Canadian Institute for Environmental Law
Telephone: (416)923-3529/(613)563-2078

Paul Muldoon, Counsel
Canadian Environmental Law Association
Telephone: (416)960-2284
(416)604-1244 (home)

CEN Toxics Caucus CEPA Review World Wide Web Site:
http://www.web.apc.org/cepa911 (Accessed through INTERNET)

CEPA GOVERNMENT RESPONSE SCORE CARD

LEGEND

GRADE	VALUE	EVALUATION	RANGE
A	90	Strong commitment to implement Standing Committee recommendations	80-100
B	75	Commitment to implement Standing Committee recommendations	70-79
C	65	Commitment to minor changes	60-69
D	55	Equivocating on implementation of Standing Committee recommendations	50-59
E	40	Recommendation rejected - No movement on present legislation	40-49
F	0	Weakens existing provisions	<40

SELECTED STANDING COMMITTEE'S PROPOSALS	EVALUATION OF GOVERNMENT RESPONSE		COMMENTS
GENERAL PRINCIPLES			
* Adoption of Key Principles (e.g. pollution prevention, transition planning, precautionary principles, virtual elimination)	B-	B-	Some Accepted
TOXIC SUBSTANCES			
* Redefining "Toxicity" to include "Inherent Toxicity" Concept	D		Commitment Unclear
* Commitment to Phase-out Use and Release of Persistent, Toxic and Bioaccumulative Substances	D		
* "Toxic Substances" be Regulated Within Two Years	C	C-	No Commitment to Regulatory Action
* Mandatory Pollution Prevention Planning for All Toxic Substances and Hazardous Waste Exporters	C-		Planning Requirements Discretionary
* National Pollutant Release Inventory be Legislated and Include Reporting on Pollution Prevention Activities	B		Accepted

BIOTECHNOLOGY			
* New Biotechnology Part Establishing Standards for All Biotechnology Products	F	F	Weakens Existing Framework
* Control of Transboundary Movement of Biotechnology Products	C		Accepted
* Public Notice of Field Tests of Biotechnology Products	E		Rejected
CITIZEN ENVIRONMENTAL RIGHTS			
* Establishment of a Public Registry and the Establishment of a Right for the Public to be Notified Of, and Comment On, proposed Regulation, Policies and Approvals	D	D	Limited Public Registry Proposed with Right to Notice and Comment Rejected
* Establishment of a Right to Apply for a Review for Existing Policies, Regulations and Other Instruments	E		Rejected
* Expansion of Opportunities to File Notice of Objections	D		One Avenue Granted Re: Ocean Dumping
* Establishment of a Right for Citizens to Bring Suit Against Violators of CEPA	D		Very Limited Right
* Establishment of a Whistleblowers' Protection Provision to Protect Persons Using Rights Under CEPA	B		Accepted
* Expand the Right to Pursue Private Prosecutions	E		Rejected
OCEAN DUMPING			
* Forbidding Dumping of Any Substance Unless Authorized on Specific List	A	A-	Accepted
* Provisions to Control Dumping in Intertidal Zone and from Wharves	A		Accepted
* Increase Public Participation in Decision-Making Process	B-		Ten day Comment Period Only
COASTAL ZONE MANAGEMENT			
* Establish Legislative Framework for Coastal Zone Management	D	D	No Commitment to Legislation
INTERNATIONAL AIR AND WATER POLLUTION			
* Strengthened Federal Authority to Implement International Obligations	F	F	Weakens Existing Provisions
* Commit Canada to Stabilize Greenhouse Gas Emissions at 1990 Levels by 2000	D		

TRANSBOUNDARY WASTE MOVEMENT		D	
* Consider Banning Solid Waste Exports	C-		Limited Powers, No Export Ban
* Ban All Exports of Hazardous Waste to Non-OECD Countries	D		Limited Restriction
ENVIRONMENTAL LAW ENFORCEMENT		B	
* Legislate Increased Inspectors Powers	B		Accepted
* Include Powers to Make Preventative Orders	B		Accepted
FUELS AND AUTO EMISSIONS			
* Consolidate Regulatory Authority with Environment Canada			
BIODIVERSITY AND ECOSYSTEM APPROACH		C-	
* Incorporate Ecosystem Approach into CEPA	C-		Preamble Only
INTERGOVERNMENTAL AGREEMENTS		B-	
* Requirements for Annual Reports, Sunset and Affirmation of Federal Authority Clauses	B		Accepted
* Standing Committee Review of Proposed Agreements	C		Limited Role for Committee
ENVIRONMENTAL PROTECTION IN FEDERAL GOVERNMENT OPERATIONS		C-	
* Strengthen Ability of Minister of the Environment to Require Action by Other Departments and Agencies	C-		Minor Changes Only
THE NORTH			
* Developers Required to Remove Any Hazardous Wastes They Generate	N/C		Contact Inuit Tapisirat of Canada (ITC)
ABORIGINAL ISSUES			
* Commitment to Increase Funding for Capacity-Building for Environmental Protection	N/C		Contact Assembly of First Nations/ITC
EMERGENCY PLANNING		E	
* Legislation of Toxics Use Inventory (Community Right to Know)	E		Rejected

TOTAL RECOMMENDATIONS BY STANDING COMMITTEE: 141
RECOMMENDATIONS ACCEPTED IN GOVERNMENT RESPONSE:
RECOMMENDATIONS REJECTED IN GOVERNMENT RESPONSE:
OVERALL SCORE: D
FINAL COMMENTS:

Appendix G

Reforming the Canadian Environmental Protection Act

A Submission to the Standing Committee on Environment and Sustainable Development

REFORMING THE CANADIAN ENVIRONMENTAL PROTECTION ACT

A SUBMISSION TO THE STANDING COMMITTEE ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

CIELAP Brief 94/7

Edited by:

Mark Winfield, Ph.D.
Director of Research

With contributions by:

Karen Clark, M.A., LL.B.
Kenneth Fisher, LL.B.
Burkhard Mausberg, B.Sc.
Barbara Rutherford, LL.B.
Mark Winfield, Ph.D.

Canadian Institute for Environmental Law and Policy
Suite 400, 517 College St.
Toronto, Ontario
M6G 4A2

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REFORMING THE CANADIAN ENVIRONMENTAL PROTECTION ACT

A Submission to the House of Commons Standing Committee on Environment and Sustainable Development

I. INTRODUCTION

The *Canadian Environmental Protection Act* (CEPA) is the government of Canada's principal environmental protection statute. At the time of its passage, CEPA was described as Canada's "first environmental bill of rights, and "the most comprehensive piece of legislation in the western world." Unfortunately, the Act has not lived up to this promise. Indeed, it is difficult to identify ways in which environmental quality in Canada has, to date, been significantly affected by the existence of CEPA.

This failure is due principally to two factors. First, and perhaps most importantly, the federal government has taken a very deferential approach to its role in environmental management within Canada. This problem is particularly evident in the "harmonization" project currently taking place under the auspices of the Canadian Council of Ministers of the Environment (CCME). The Canadian Institute for Environmental Law and Policy (CIELAP) is of the view that the federal government must adopt a more assertive approach to the exercise of its jurisdiction in the environmental field, in order to provide national leadership and ensure minimum levels of environmental protection for all Canadians.

Secondly, the federal Department of the Environment has never fully accepted the regulatory mandate and role with which CEPA provided it. Rather, the department has continued to emphasize its traditional "advisory" and "promotional" approaches to its functions, and has been reluctant to enforce those regulations which have been made under CEPA with much vigour. If CEPA is to succeed, Environment Canada has to accept the regulatory role established for it by the statute, and act on this mandate.

In addition to these two overriding points, CIELAP proposes extensive revisions to CEPA as currently drafted. These include a strengthening of public accountability mechanisms regarding to the use of federal-provincial intergovernmental agreements related to the Act, and the addition of a "citizen suit" provision to CEPA to assist in ensuring that the Act is adequately enforced. Further amendments are proposed to improve the assessment process for new chemical substances under CEPA and to increase opportunities for public participation in the process. A new biotechnology part for CEPA is also recommended. This would expand the range of evaluative criteria employed in the assessment of new biotechnology products, enhance the capacity of the federal government to control the use of biotechnology products, and provide greater opportunities for public input and involvement in the regulation of these products.

The potential use of "economic" policy instruments under CEPA is examined in some detail. CIELAP has very serious concerns regarding the use of emission trading systems, particularly in relation to substances considered "toxic" for the purposes of CEPA. However, the Institute is strongly supportive of the use of taxes or charges on the use or manufacturing of "toxic" substances, both as a means of discouraging their use or manufacturing and as a means of funding environmental remediation and pollution prevention research and development programs.

Finally, the issue of environmental management within the operations of the federal government itself is reviewed. CIELAP proposes a strengthening of the Minister of the Environment's capacity to address environmental management within the federal government. A requirement that each federal department develop an internal environmental management plan, whose implementation would be subject to review by the proposed federal Environmental Commissioner, is also proposed.

II. THE ROLE OF THE FEDERAL GOVERNMENT IN THE PROTECTION OF THE CANADIAN ENVIRONMENT[1]

The Federal Government's Approach to its Domestic Environmental Role

Federal/provincial relations with respect to environmental protection have been strongly coloured by federal reluctance to stand on its constitutional authority to protect the environment. Yet the achievement of environmentally sustainable development in Canada will require a strong federal role. The federal government must exercise its authority to set minimum national quality standards for all Canadians.

The federal government's jurisdiction over toxics is well-supported under several federal heads of power, some of which can provide needed constitutional support to others. The federal government's power to enact criminal law in respect of health, the peace, order and good government clause, the fisheries power, the spending power, the trade and commerce power, and the taxation power, separately and combined, provide the federal government with ample jurisdiction to enact minimum national environmental standards.

1) *In order to ensure that nothing in CEPA prevents a broad reading of the federal government's environmental jurisdiction, particularly its capacity to set minimum national standards, the preamble of CEPA be amended to explicitly state that:*

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[1].Refer to Appendix 1 - **The Constitution, Federal-Provincial Relations, Harmonization and CEPA**, for a detailed discussion of these issues.

"...Whereas the Government of Canada in demonstrating national leadership should establish national environmental quality objectives, guidelines, codes of practice and standards..."

Equivalency, Administrative and Intergovernmental Agreements and CEPA

Equivalency, Administrative and Intergovernmental agreements are a potentially useful mechanisms for facilitating federal-provincial cooperation in environmental management. However, concerns exist regarding the extremely weak accountability mechanisms associated with the use of these agreements.

2) *In order to address these concerns CEPA should be amended to provide that:*

* *the federal government's intention to negotiate an intergovernmental agreement is made public, through pre-publication, public consultation, and the publication of draft agreements in Part I of the Canada Gazette with appropriate comment periods;*

* *once agreements have been concluded, they be published in the Canada Gazette part II and indexed;*

* *all agreements require detailed annual reporting to Parliament on the administration and enforcement of federal laws or equivalent provincial laws;*

* *all agreements have sunset clauses requiring periodic review; and*

* *all agreements should permit the federal government to retain its right to prosecute under federal statutes when entering into such agreements. Mechanism permitting citizens who believe that enforcement by provincial officials is inadequate to petition for federal enforcement or to undertake private prosecutions, should also be included in agreements.*

Harmonization

Although not currently addressed within CEPA, the "harmonization" exercise presently being pursued through the Canadian Council of Ministers of the Environment (CCME) will have major implications for the future role of the federal government in environmental management in Canada. The harmonization initiative proposes to do something that has never been accomplished before: it attempts to establish clear, consistent, national environmental protection standards for Canada.

Unfortunately, the "harmonization" process currently under way under the auspices of the CCME raises a number of serious concerns, and cannot be endorsed in its present form. The justification presented in support of the effort (duplication and overlap) has yet to be fully demonstrated as a significant problem. In addition, the constitutional propriety of some of what is proposed as part of the exercise is open to question. Furthermore, the dynamics of the harmonization process among the provinces may lead to a "race to the bottom" and the adoption of "lowest common denominator" standards.

The likelihood of such an outcome is reinforced by the emphasis placed in the process on the concerns of business interests. The capacity of the process to result in constraints on the ability of provinces to raise standards independently and to adopt innovative policy approaches is also a major concern.

However, perhaps the most serious flaw in the harmonization project is the underlying potential for the federal government to abdicate any meaningful role in environmental management in Canada. The federal government appears willing to limit itself to whatever role the provinces regard as being appropriate for it. Furthermore, the federal government appears to be distinctly unwilling to press the provinces to adopt standards or requirements beyond which they would be prepared to act upon on their own initiative. This raises questions regarding the federal government's future role in domestic environmental policy.

The federal government must affirm the fact that it is interested in what happens to Canada's environment and will intervene to the full extent of its jurisdictional capacity when it feels it is necessary to do so. The establishment of minimum standards for environmental protection within Canada is clearly provided for by CEPA and other federal statutes. It is now up to the federal government to demonstrate the political will necessary to effectively fulfil these responsibilities.

III. CEPA AND ENVIRONMENTAL LAW ENFORCEMENT[2]

Environment Canada's enforcement practices fall far short of what could be realized under the CEPA. There has been, since before CEPA was passed, a marked reluctance on the part of the federal Department of the Environment to act as a regulatory and enforcement body – a role which CEPA requires it to play. This reluctance, attributable in large part to the "advisory" role originally conceived as the chief purpose of the Department of the Environment, that has resulted in significant failures in CEPA's enforcement. Furthermore, the Act's weak enforcement record has negatively affected the perceived legitimacy of federal action in the field of environmental regulation.

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[2].Refer to Appendix 2 - **CEPA and Environmental Law Enforcement** for a detailed discussion of these issues.

The federal government must now, as it reviews CEPA, confront the legacy of its reluctance to assert its legitimate jurisdiction to implement and enforce the Act. As reviewed elsewhere in this submission, plans have been initiated to harmonize federal/provincial environmental regulation. There are also increasing international pressures to not only standardize regulations, but to coordinate them with the imperatives of sustainable development and pollution prevention as well. Environment Canada has shown some tentative interest in including these considerations in the CEPA Review. The challenge that now confronts the federal government is how it will demonstrate that it has preserved for itself the regulatory legitimacy that these initiatives will require.

Environment Canada's Departmental Mandate

3) *The Department of the Environment must accept the regulatory mandate provided to it by CEPA. The Department can no longer limit itself to an "advisory" and "promotional" role. CEPA provides the department with clear direction to provide for the life-cycle regulation of toxic substances in Canada and a number of additional regulatory functions. The department must accept and operationalize these regulatory functions as part of its institutional mindset and core administrative policies. In the context of CEPA, Environment Canada's mandate must now be recognized as being two-fold:*

   1) *to provide information clearly, and in a timely fashion to regulated industries; and*

   2) *to enforce compliance with the requirements of the legislation when it is necessary to do so.*

   This regulatory mandate should be affirmed by the Standing Committee on Environment and Sustainable Development and by the government as a whole.

Departmental Restructuring

In order to operationalize this regulatory mandate Environment Canada's enforcement functions should be restructured.

4) *Following the model of the Ontario Ministry of Environment and Energy, information and promotion, and enforcement functions should be clearly separated.*

5) *The need for Environment Canada to obtain permission from the Department of Justice to undertake prosecutions should be eliminated. Rather prosecutions should be handled by Environment Canada's own legal services branch, as is the case with the Ontario Ministry of Environment and Energy.*

6) *Investigative and legal services staff should be given greater authority to decide when to prosecute.*

Sanctions and Enforcement Powers

7) *The quasi-criminal sanctions currently contained in CEPA (ss.111-115) should be retained. The presence of these sanctions in the Act underline the value of respect for the environment itself and stigmatize behaviour causing serious damage to the environment.*

8) *Consistent with the affirmation of Environment Canada's regulatory mandate through CEPA, inspectors' powers under CEPA (ss.100-110) should be expanded to include:*

* *the authority to issue "cease and desist" or "stop" orders to oblige a regulated party to stop an illegal activity, without the requirement for formal court action;*

* *the authority to issue preventative orders to require regulated parties to take preventative or corrective action before a violation actually occurs;*

* *the authority to require regulated parties to report on how they have complied with "cease and desist" or "stop" orders or preventative orders;*

* *the authority to gain entry where an owner refuses consent; and*

* *the right to serve subpoenas and summons in accordance with s.509(2) and s.701(1) of the Criminal Code.*

A Citizen Suit Provision for CEPA

In addition to the strengthening of the enforcement functions within Environment Canada, we propose a further enforcement tool: citizen suits. A citizen suit provision would allow citizens to be the "eyes and ears" of the government – assisting in the implementation of a clearly articulated enforcement and compliance policy.

9) *CEPA should be amended to permit citizen suits to ensure that the requirements of CEPA and any regulations made under the Act are met. A separate provision should be included in CEPA with the following features:*

* *a clear articulation of any person's right to bring an enforcement action,*

subject to proof of an offence, or imminent offence, on a balance of probabilities;

* *provide for the granting of injunctions ordering the person named in such actions to refrain from any action that may constitute or be directed towards the commission of an offence under CEPA, or to do anything necessary to prevent the commission of an offence under CEPA;*

* *where CEPA has been contravened, the person named in an application can be required to develop and implement a restoration plan to repair any damage caused to the environment in the course of the violation of CEPA;*

* *permits citizens to share in penalties levied against the wrong-doer upon conviction;*

* *in the event that the Attorney-General decides to pursue the case, the citizen, or citizens' group, should be entitled to remain a party to the prosecution;*

* *in the event that the Attorney General settles the case without formal legal proceedings, the citizen should be entitled to participate in the settlement negotiations and should be entitled to become a party to any agreement signed;*

* *specifically stipulate that the court consider whether the case is a test case or raises a novel point of law, in making cost awards in relation to citizen suit actions;*

* *makes available interim cost awards to citizen enforcers;*

* *creates a fund to assist citizen enforcement actions; and*

* *requires that where equivalency agreements are permitted under CEPA, the test for equivalency include the provision of citizen suits under the "equivalent" provincial law.*

IV. CEPA AND CHEMICAL NEW SUBSTANCES[3]

The new substances provisions of CEPA are among the most important aspects

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[3].Refer to Appendix 3 - **CEPA, Chemical New Substances and Biotechnology**, Part II for a detailed discussion of these issues.

of the Act. Their significance is due to two principal features. First, the pre-commercial evaluation of new substances is the ultimate preventative activity. Rather than waiting for substances to cause damage to the environment or human health, new substances can be assessed and, if necessary, their use controlled, to prevent such outcomes. Secondly, the CEPA new substances provisions are not limited to the assessment of new chemicals. Other new "substances," such as biotechnology products, can also be assessed through the Act. In fact, CEPA was the first environmental statute in Canada to specifically recognize biotechnology products as a distinct category of substances.

The screening of new substances prior to commercialization is an ideal opportunity to apply the principles of pollution prevention and a precautionary approach to the management of potentially harmful substances. These provisions of the Act should be used to provide clear signals to industry regarding the types of new substances which are likely to be approved for use in Canada, and the characteristics of substances which will result in prohibitions or severe restrictions on use. This would provide direction to firms in terms of their investment and research and development decisions.

However, the CEPA new substances provisions, as presently drafted, suffer from a number of significant substantive and procedural weaknesses which make the achievement of this goal difficult. In particular, the relationship between the new substances provisions of CEPA and similar provisions contained in other statutes must be clarified, and the status of the CEPA provisions as providing a minimum assessment standard for all new substances affirmed. In addition, opportunities for public participation in the new substances assessment and approval process must be strengthened, as well as public access to information regarding new substances. The Act must also be amended to widen the scope of the assessment of the potential environmental and health effects of new chemical substances, strengthen the ability of the federal government to deal with substances "suspected of toxicity" or for which inadequate information to assess exists, provide clear provisions regarding the authorization and regulation of field tests of new substances, provide for more realistic assessment time frames, and to ensure the full assessment of substances intended for export from Canada.

In this context, we make the following recommendations:

The Definition of "Toxicity"

10) *The definition of "toxic" for the purposes of CEPA should be refined to stress the intrinsic characteristics of a substance in terms of its potential to cause harm to the environment or human health, rather evidence of its presence in the*

environment in sufficient quantity or concentration to cause "toxic" effects.[4]

11) *CEPA should be amended to require that new substances found to be "toxic" for the purposes of CEPA be placed on the Toxic Substances List.*

A "Sunrise" Protocol

12) *CEPA should be amended to require that new substances which are persistent, bioaccumulative and "toxic" not be allowed to be manufactured, imported or used in Canada (a "sunrise" clause). Thresholds for persistence and bioaccumulation should be established through regulation. Exemptions to the "sunrise" clause should only be allowed in exceptional circumstances.*

13) *Pollution prevention plans, acceptable to the Minister of the Environment, should be required to be developed by notifying parties for "toxic" substances whose use or manufacture are not prohibited through the "sunrise" protocol, prior to their use or manufacturing being permitted within Canada.*

The Relationship Between CEPA New Substances Provisions and Other Statutes

14) *Explicit criteria for establishing the equivalency of other statutes for new substances notification and assessment purposes should be included in the CEPA new substances provisions. These criteria should include:*

- *requirements that notice be given prior to the import, manufacture or sale of a substance and for an assessment of whether it would be considered "toxic" for the purposes of CEPA;*
- *provisions for public participation in the notification and assessment process equivalent to those contained in CEPA; and*
- *the availability of federal control options for substances found to be "toxic" or suspected of being "toxic" equivalent in scope to those available under CEPA.*

15) *CEPA should be amended to require the Governor in Council to publish a list of statutes considered equivalent to CEPA for the purposes of new substances assessments.*

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[4] A supplemental submission on the issue of the definition of "toxicity" will be provided by the Standing Committee by the CEN Toxics Caucus.

Exemptions from CEPA New Substances Provisions

16) *CEPA should be amended to ensure that the assessment of new substances includes consideration of the potential health and environmental effects of by-products arising from the production, use, storage or environmental exposure of a new substance.*

Status of Substances "Suspected of Toxicity."

17) *The capacity of the federal government to control the manufacture, or import of substances "suspected of toxicity" should be strengthened. Prohibitions on the import or manufacturing of substances found to be in this category should be permitted to remain in force beyond the two year time limit currently provided by CEPA, so long as the substance continues to be "suspected of toxicity." Requests for Boards of Review on the status of substances "suspected of toxicity" should be permitted two years after the imposition of a prohibition on the import or manufacturing of such a substance.*

Status of Substances For Which Inadequate Information Exists to Assess "Toxicity."

18) *CEPA should be amended to permit the minister to maintain prohibitions on the importing or manufacturing of a new substance until sufficient information is provided to permit an assessment of the "toxicity" of the new substance. This approach would follow that taken in the Pest Control Products Regulations regarding the registration of pesticides in such circumstances.*

Assessment of Substances for Export Only

19) *CEPA should be amended to ensure that new substances intended for export are assessed for "toxicity" in the same way as substances intended for domestic use. The export of products subject to prohibitions on manufacturing or use in Canada should not be permitted. Similarly, substances subject to conditions on use or processing in Canada should not be permitted to be exported for uses or processes which are not permitted in Canada.*

Assessment Timeframes

20) *The default assessment time limits for assessment contained in sections 32(2) and 29(2) should be extended to a minimum of one hundred eighty days.*

Field Tests of New Substances Under Assessment

21) *CEPA should be amended to require that field tests of new substances receive a specific approval under CEPA. The minister should be permitted to approve tests, approve tests subject to conditions, or to refuse to permit a test. Failure to follow the conditions of a test approval should constitute an offence under CEPA. Failures to follow laboratory procedures required by regulations made under s.32 of CEPA should also constitute an offence under CEPA.*

Public Participation in Decision-Making

22) *CEPA should be amended to require public notice in the Canada Gazette when:*

- *notification information packages are received by Environment Canada and Health Canada regarding new substances; and*
- *field tests involving the open environmental release of a new substance are proposed.*

In addition to providing notice in the Canada Gazette, the minister should be permitted to provide public notice of an impending decision under CEPA in any other manner which he or she feels appropriate.

23) *Public comment periods of not less than sixty days should be provided following all public notices provided under CEPA.*

24) *Public Notice of proposals for field tests involving the environmental release of new substances should be required to be published in a newspaper of general circulation in vicinity of the test. Requirements for the direct notification of the owners and occupiers of lands adjacent to a test site should also be included.*

25) *CEPA should be amended to permit any person to file a notice of objection requesting a Board of Review regarding:*

- *the addition of substances to the DSL (s.30);*
- *the waiving of information requirements (s.26);*
- *the approval with conditions or when prohibitions or conditions regarding substances suspected of being "toxic" are varied or rescinded (s.29);*
- *the approval of field tests of new substances, particularly those involving open release into the environment; and*
- *the need for a regulation to prohibit or control the use, manufacture, processing, sale, offering for sale, import or export of a "toxic" substance or a product containing a "toxic" substance.*

26) *Under each of these circumstances a Board of Review should be required to be established, except for when the request can be shown to be frivolous or vexatious. Ministers should be required to respond to a notice of objection requesting the establishment of Boards of Review within thirty days of receiving the request.*

27) *CEPA should be amended to provide for intervenor funding assistance to bona fide public interest intervenors in CEPA Board of Review Proceedings. A fund should be established to provide for intervenor funding awards. This might be funded through fines imposed in relation to offences under CEPA, charges imposed in the use of "toxic" chemicals, and the imposition of user fees for the new substance notifications and assessments.*

Access to Information

28) *To avoid abuse of its confidentiality provisions, CEPA should be amended to provide that:*

- *the definition of what can be kept confidential be narrowed to include only "trade secrets;"*
- *the claimant for confidentiality be required to provide supportive evidence of confidentiality when making a claim;*
- *requests for confidentiality on the identities of substances which will, or may be, released into the environment, not be permitted;*
- *requests for confidentiality should not be permitted regarding information on toxicology, ecological effects, epidemiology or health and safety studies; and*
- *there be a public appeal process regarding determinations that information is confidential.*

V. CEPA AND BIOTECHNOLOGY PRODUCTS[5]

The current new substances provisions of CEPA are designed to include biotechnology products as well as new chemicals. However, the regulation of new

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[5].Refer to Appendix 3 - **CEPA, Chemical New Substances and Biotechnology**, Part III, for a detailed discussion of these issues.

biotechnology products presents a number of special challenges beyond those provided by new chemical substance. Indeed, Environment Canada and Health Canada have recognized biotechnology products as a unique category of new substances. The departments have been developing a separate notification regulation of biotechnology products under section 32 of CEPA. A commitment to establish a national regulatory regime to address the environmental risks of the biotechnology industry by 1995 was made in the federal government's Green Plan.

Biotechnology products present a number of special environmental and health risks which distinguish them from traditional chemical substances. Two major areas of concern have been identified in this regard:

(a) Many biotechnology products include life-forms which are self-replicating. Once released into the environment, they can reproduce, spread and mutate and transfer genetic material. The control of biotechnology products, and their genetic material, once in the environment, will therefore be difficult, if not impossible.

(b) The technologies employed in the development of many new biotechnology products have only emerged over the past twenty years (especially recombinant DNA and cell fusion technologies). The evaluation of such products for potential environmental damage is surrounded by a great deal of uncertainty. Indeed, the scientific literature reflects wide concerns regarding the lack of adequate methodologies and data to properly assess the environmental and health effects of the products of biotechnology.

Methods of predicting the consequences of deliberate introduction of new life forms in the environment are still under development. The potential risks associated with biotechnology products are often described as being of a "low probability, high consequence risk." In other words, although the chances of something going wrong may be very slight, if something does go wrong, the ecological consequences may be tremendous. In addition, concerns have been expressed by a wide range of stakeholders regarding the value and purpose of many of the emerging applications of biotechnology which may be released into the environment.

The "toxicity" test forms the basis for CEPA's regulation of new substances. New substances must be found "toxic" under the definition employed by CEPA in order to be regulated under the Act. A number of problems have been identified with the definition and application of the concept of "toxicity" under CEPA in relation to chemical substances. Furthermore, the "toxicity" standard, as it is presently applied in the context of chemical substances appears to be too narrow an evaluative structure in relation to the potential scope of the effects of the use of biotechnology products. In addition, it is an excessively stringent test in relation to the level of uncertainty regarding the environmental and health effects of these products. This is especially true with respect to the potential long-term, indirect and cumulative environmental and health risks associated with

biotechnology products.

The "toxic" standard employed in CEPA was largely developed for the purpose of establishing federal constitutional authority to regulate potentially harmful chemical substances. It was intended to define a distinct and bounded category of substances to be controlled through the federal parliament's general power to legislate for the Peace, Order and Good Government of Canada. However, the federal authority to regulate biotechnology products may not require the establishment of "toxicity," as is the case with chemical products. Federal jurisdiction over new subjects with national dimensions, and over Agriculture, Fisheries, Trade and Commerce, and criminal law in relation to public health, may provide the basis for federal regulatory authority over biotechnology products independent of "toxicity." Furthermore, those few provinces which have considered the regulation of biotechnology products appear to be prepared to concede primary responsibility for their assessment and approval for use in Canada to the federal government. A division of responsibility similar to that which has emerged regarding pesticides, in which the federal government assesses and registers products for general use in Canada, and the provinces authorize specific applications, may be envisioned for biotechnology products which might be released into the environment.

The unique characteristics of many biotechnology products as life forms, the level of uncertainty regarding the assessment of their potential environmental and human health impacts, and lack of consensus regarding the value of many of their applications makes apparent the need to address these products differently from chemical new substances under CEPA.

A New Biotechnology Part for CEPA

29) *A new and separate part of CEPA should be enacted to deal specifically with biotechnology products. This part would, in effect, establish a federal registration and regulatory system for biotechnology products which may enter the Canadian environment or be exported from Canada.*

The major features of this part would include the following.

Scope

30) *The biotechnology part of CEPA would regulate all releases of genetically engineered organisms, and releases of naturally-occurring organisms into habitats in which they do not occur naturally, or in quantities or concentrations beyond those in which they naturally occur. Notification and assessment requirements would be established to cover all stages of product development in which environmental releases might occur, from laboratory research to*

commercialization.

The Relationship Between CEPA and Other Statutes Regulating Biotechnology Products

31) *As is proposed with respect to new chemicals, biotechnology products could continue exempted from the requirements of the CEPA notification and assessment process, if they are regulated through another statute which clearly provides for an equivalent process. Criteria for equivalency should include:*

- * *requirements that notice be given prior to the testing, import, manufacture, use or sale of the substances and for an assessment of the:*
  - *purpose;*
  - *efficacy;*
  - *direct, indirect and cumulative environmental and human health impacts; and*
  - *availability of alternatives to the biotechnology product;*
- * *provisions for public participation in the notice and assessment process equivalent to those contained in the CEPA biotechnology part; and*
- * *the availability of federal control options equivalent in scope to those available under the CEPA biotechnology part.*

32) *The Governor in Council should be required to publish a list of statutes considered equivalent to CEPA for the purpose of the assessment of new biotechnology products.*

Field Tests and Laboratory Procedures

33) *Field tests of new biotechnology products should require a specific approval under CEPA. The minister should be permitted to approve tests, approve tests subject to conditions, or to refuse to permit a test. Failure to follow the conditions of a test approval should constitute an offense under CEPA.*

34) *Notice of proposals for field tests would be required to be published in a newspaper of general circulation in vicinity of the test. Requirements for the direct notification of the owners and occupiers of lands adjacent to the test site should also be included. A comment period of not less than sixty days should follow notice of a proposed field test. Mechanisms to provide for the filing of notices of objection and the establishment of Boards of Review in the event that members of the public object to the conduct of a field test are also required.*

35) *The capacity of the Governor-in-Council to make regulations regarding laboratory*

procedures regarding biotechnology products should be clearly established. Failures to follow laboratory procedures required by regulations should constitute an offense under CEPA.

Assessment Criteria

36) *In determining whether to approve, approve with conditions or prohibit the use, manufacturing, processing, sale, offering for sale, import or export of a new biotechnology product or products containing the new biotechnology product, the minster should consider:*

- *the information received from the proponents;*
- *comments received from members of the public; and*
- *information available from any other source regarding:*
  - *the purpose for which the biotechnology product has been developed;*
  - *the effectiveness of the product for its intended purpose;*
  - *the biological and ecological characteristics of the biotechnology product*
  - *the potential immediate and long-term direct and indirect environmental and human health effects of the product, including the cumulative effects of commercial scale use and impacts on biodiversity;*
  - *the availability and likely effectiveness of monitoring, control, waste treatment and emergency response plans with respect to the product; and*
  - *the availability of alternative means of achieving the product's purpose which may pose lower environmental and health risks.*

37) *Products whose assessment demonstrates:*

- *the potential for harm to human health or the environment;*
- *ineffectiveness for their intended purpose;*
- *the availability of alternatives which have a lower potential for harm to the environment or human health; or*
- *whose intended purpose is found to not to serve the public interest,*

should not be approved for use or manufacturing in Canada.

Public Participation in Decision-Making

38) *The public participation provisions of the biotechnology product assessment process would parallel those proposed for the assessment of new chemical substances under CEPA. This would include:*

- *public notification when applications for the approval of the manufacture, use, import or export of new biotechnology products, or products containing new biotechnology products are made, in the Canada Gazette.*
- *provision of a public comment period of not less than ninety days following the notice;*
- *public access to the information submitted in response to the information requirements regarding new biotechnology products in a manner consistent with the principles outlined in the Chemical New Substances section of this submission* **(Recommendation 28).**

39) *Notice of the minister's decision regarding the approval for use or manufacturing in Canada of a new biotechnology product would be provided in the Canada Gazette, to the applicant, and to any person who made a comment during the public comment period. A decision to approve or approve with conditions would not take effect for a period of thirty days to provide an opportunity for any person to file a notice of objection requesting the establishment of a Board of Review. Notice and opportunities to file notices of objection should also be available when the variations to approvals, approvals with conditions or prohibitions are proposed.*

40) *Procedures for Boards of Review regarding biotechnology products would follow those proposed for Boards of Review regarding chemical new substances* **(Recommendations 26 and 27).** *Boards would have to be established unless the request is frivolous or vexatious, approvals should be suspended until any notice of objection is resolved, and intervenor funding should be provided for bona fide public interest intervenors.*

Biotechnology Environmental Release Database

41) *The establishment of a data-base on the environmental release of all biotechnology products in Canada should be provided for. All environmental releases should be required to be entered into the data base, and members of the public should have direct access to the data base.*

This proposal for the establishment of a separate biotechnology part of CEPA is intended to provide the basis of a regulatory structure for biotechnology products which

would ensure the protection of environmental integrity and human health, and strengthen public confidence in the government of Canada's evaluative and regulatory processes for these products.

VI. CEPA AND ECONOMIC INSTRUMENTS[6]

As our understanding of the underlying economic and political causes of environmental degradation increases, it has become apparent that it is necessary to expand the range of tools which we employ to protect the integrity of the environment. In this context, "economic" policy instruments, such as the imposition of taxes on environmentally harmful activities, and the creation of markets for permits to emit pollutants, have attracted growing interest over the past few years.

Economic instruments have been incorrectly touted both as "voluntary" mechanisms and as enforcement tools. Economic instruments, such as environmental taxes and tradeable permits, are defined, for the purposes of this discussion, as those instruments having the potential to alter behaviour by providing monetary incentives to reduce and/or eliminate the creation and discharge of contaminants. Economic incentives, such as subsidies, can also alter behaviour, yet they do so through encouragement, rather than as parts of regulatory systems.

There are several critical prerequisites for a successful regulatory regime which includes the use of economic instruments. The first requirement is a discharge monitoring system that allows both the firm and the regulators to measure accurately total discharges and any reduction in discharges for the purposes of approving a trade or levying a tax. Secondly, clearly enforceable environmental quality standards, must be established to serve as baselines for a minimum level of environmental quality that have to be met at all times. These points highlight one of the fundamental obstacles to the use of tradeable permits and discharges fees under CEPA: the general paucity of permitting provisions in the Act.

Economic instruments can be used to supplement traditional regulatory systems. They cannot, however, replace such systems. Furthermore, it is essential, that economic instruments be designed very carefully to promote pollution prevention. Instruments of this nature must be supported by detailed enactments, which clearly establish all of the necessary aspects of the system. This would be especially important in the case of tradeable permit systems. Adequate provisions for monitoring and enforcement must also be made.

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[6].Refer to Appendix 4 - **CEPA and Economic Instruments**, for a detailed discussion of these issues.

Emissions Trading

Experience with emission trading systems is extremely limited and their effectiveness is a matter of considerable arguement. The practicality of implementing such systems successfully is a matter open to serious question. Trading systems require extensive and complex administrative, monitoring and enforcement structures, and their potential environmental and economic effectiveness, even when such mechanisms are in place, is the subject of continuing debate.

In the context of CEPA, the dearth of permitting provisions under the Act presents a major problem in the design and implementation of a trading system at the federal level. To what federal permission would the tradeable permits attach? In light of the problems surrounding the use of tradeable permit regimes, particularly with respect to "local loading" effects, the authorization of the trading of ocean dumping permits, the only formal approval presently granted under CEPA, cannot be recommended.

The problem of "local loading" and numbers of potential sources of emissions also render trading systems inappropriate for the management substances considered "toxic" for the purposes of CEPA. The maintenance of the integrity of the environment should not be placed at risk to achieve theoretical promises of economic efficiency.

There is, theoretically, a potential federal role in management of a trading system regarding non-"toxic" air emissions which permits interprovincial trades. However, in addition to overcoming the extensive administrative, enforcement, monitoring and distributive problems associated with trading systems, the federal and provincial governments would be required to work together in a manner unprecedented in the Canadian environmental policy experience in order to establish such a system. Legislative provisions to implement a system of this nature could not be considered until a complete system design, acceptable to all stakeholders, was developed.

42) *CEPA should not be amended to permit the trading of ocean dumping permits or emission trading involving substances considered "toxic" for the purposes of CEPA.*

Fees and Charges

The imposition of discharge fees under CEPA may present a number of problems, especially in relation to the absence of federal discharge permitting systems, except for ocean dumping, and the potential of federal discharge fees to interfere with provincial environmental permitting systems. Charges levied on the manufacture, use, or processing of "toxic" substances would avoid the possibility of interference with provincial jurisdiction, and provide incentives to reduce the manufacturing or use of such substances.

43) *Section 34 of CEPA should be amended to permit imposition of charges on use,*

processing, manufacturing, sale, import, or export of a "toxic" substance or products containing a "toxic" substance.

44) *Revenues raised from such charges should be employed to finance federal contributions to the National Contaminated Sites Rehabilitation Program. Revenues might also be used to support the development and diffusion of skills and technologies related to pollution prevention within Canada.*

VII. CEPA AND THE FEDERAL HOUSE IN ORDER[7]

It is widely accepted that the federal government has failed in its declared goal of demonstrating moral leadership in the field of environmental protection. It has not made the implementation of Part IV of CEPA a high priority, and has relied almost entirely on a voluntary approach to compliance. In order to address this failure we make the following recommendations.

45) *CEPA should be amended to permit, on the recommendation of the Minister of the Environment, the Governor in Council to make regulations for the purpose of the protection of the environment with respect to federal works, undertakings or lands. Such regulations would take precedence over any other regulations resulting in environmental protection applying to federal works, undertakings or lands made under any other Act of Parliament.*

46) *CEPA should be amended to permit, on recommendation of the federal Minister of the Environment, the Governor in Council to make regulations for the protection of the environment with respect to the activities and operations of federal departments, boards, agencies and, where appropriate, corporations named in Schedule III of the Financial Administration Act.*

47) *The Minister of the Environment should be permitted to make "Environmental Protection Orders" for the purpose of protection of the environment with respect to federal works, undertakings or lands, and with respect to the activities and operations of federal departments, boards, agencies and Financial Administration Act Schedule III corporations in the absence of regulations made for this purpose by the Governor in Council. Such orders should be legally binding instruments.*

48) *CEPA should be amended to require that each federal department, board, agency and Financial Administration Act Schedule III Crown corporation develop an environmental management plan. Initial plans should be required to be in place*

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[7].Refer to Appendix 5 - **CEPA and the Federal House in Order** for a detailed discussion of these issues.

within one year of coming into force of the amendments to CEPA. CEPA should also require that, once in place, Environmental Management Plans be reviewed publicly every four years.

Each Environmental Management Plan would outline:

* *The key environmental issues facing the department, board, agency or corporation in its operations and activities; and*

* *an implementation plan to ensure that in its operations and activities the department, board, agency or corporation:*
  - *practices and promotes pollution prevention through the reduction and elimination of the use, generation or release of pollutants into the environment;*
  - *practices and promotes natural resource conservation through energy efficiency, water efficiency and waste reduction, reuse, recycling and composting;*
  - *protects and enhances biodiversity;*
  - *promotes the conservation, protection and enhancement of ecosystem integrity; and*
  - *protects environmentally sensitive areas.*

The adequacy of Environmental Management Plans and compliance with requirements could be regularly reviewed and reported upon by the proposed federal Environmental Commissioner.

VIII. FIVE YEAR PARLIAMENTARY REVIEWS OF THE PROVISIONS AND OPERATION OF CEPA

49) *CEPA should be amended to require a comprehensive review of the provisions and operation of the Act every five years by such committee of the House of Commons, or of both Houses of Parliament, as may be designated or established by Parliament for this purpose.*

IX. CONCLUSIONS

To date, CEPA's impact on environmental protection in Canada has been a major disappointment. This failure arises from fundamental problems related to the federal government's approach to its role in environmental protection within Canada, and Environment Canada's unwillingness to act on the regulatory mandate provided to it by CEPA. These issues cannot be fully addressed through amendments to Act. Rather, action at the political level is required.

In addition, CEPA is in need of major revisions to strengthen the enforcement of federal environmental statutes, increase public participation in decision-making, improve accountability for decisions made under the Act, enhance the capacity of the federal government to regulate "toxic" substances and biotechnology products, and widen the range of tools available to the federal government in these tasks.

CIELAP anticipates that the review and reform of CEPA will be the major environmental legislative initiative of the federal government in the next two years. We hope that our submission will be of assistance to the Standing Committee in its work, and look forward to further opportunities to contribute to this important process.

APPENDIX 1

THE CONSTITUTION, FEDERAL-PROVINCIAL RELATIONS, HARMONIZATION AND CEPA

Prepared by:

Karen Clark, B.A., M.A., LL.B.

and

Barbara Rutherford, B.A., LL.B.
Research Associates

Canadian Institute for Environmental Law and Policy
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THE CONSTITUTION, FEDERAL-PROVINCIAL RELATIONS, HARMONIZATION AND CEPA

I. INTRODUCTION

In its document providing an overview of the issues for CEPA review,[1] Environment Canada identifies sustainable development and the coordination and harmonization of federal and provincial legislative and regulatory initiatives as two key issues. This paper explores the issues of constitutional basis of the federal role in environmental management, intergovernmental relations and the "harmonization" exercise currently being conducted under the auspices of the Canadian Council of Ministers of the Environment (CCME) in the context of sustainable development.

A brief overview of how governmental responsibility for environmental protection is allocated under the Canadian Constitution is provided. This is followed by a review of the past and current state of federal-provincial relations with respect to the environment. This review concludes that cooperation has been the exception rather than the rule in the environmental field.

Intergovernmental agreements are identified as an important exception to the general history of federal/provincial non-cooperation. Unfortunately, where the federal and provincial government have come to agreements to share responsibility for environmental protection, the results have been disappointing. These agreements present Canadian citizens with a number of challenges, as being administrative in nature, they require neither public comment nor review, and there are no mechanisms within them by which citizens can compel enforcement of the legislation to which the agreements apply.

Although not currently addressed within CEPA, the "harmonization" exercise presently being pursued through the CCME will have major implications for the future role of the federal government in environmental management in Canada. The harmonization initiative proposes to do something that has never been accomplished before: it attempts to establish clear, consistent, national environmental protection standards for Canada. However, given the poor past record of federal/provincial cooperation, and federal government's weak approach to its national role, the harmonization project has the potential to result in a "race for the bottom." The national standards achieved under harmonization may be whatever the lowest provincial standards are now.

Throughout the discussion, it is apparent Federal/provincial relations have been strongly coloured by federal reluctance to stand on its constitutional authority to protect the environment. Yet the achievement of environmentally sustainable development in Canada will require a strong federal role. The federal government must exercise its authority to set minimum national environmental protection standards for all Canadians.

II. FEDERAL JURISDICTION AND CEPA

The extent to which the Constitution of Canada affects the regulatory powers of the federal and provincial governments used to be an esoteric subject matter -- the province of constitutional scholars in their ivory towers. No longer can this be said to be true, as the average Canadian, including the average bureaucrat and politician, has been subjected to more constitutional debate during the past few years than they would likely have ever desired. That being said, it is necessary here to reiterate a summary of the division of powers as it relates to the federal government's management of the environment.

Constitutional law, even with its recent infamy, still remains one of the most complex areas of jurisprudence. Thus while we attempt to present a synopsis of the relevant constitutional issues pertaining to the CEPA review, this discussion should in no way be considered to be a comprehensive legal opinion.[2] Discussion of constitutional law is worse than useless in a vacuum; therefore our primary recommendation at the outset is that the Standing Committee refer specific questions of constitutional law to a panel of well-known and respected constitutional and environmental experts, including lawyers from outside the federal and provincial governments. Moreover, we heartily recommend that this advisory panel be struck with the mandate to recommend how CEPA reform can be accomplished under the constraints of the constitution; rather than encouraging yet another negative pronouncement on why the federal government cannot do what it must do to protect the health and environment of all Canadians. Our constitution is a "living tree" with flexibility to serve many generations of Canadians. What we have been lacking is the vision and innovation to use our constitution in this way. Instead, we allow our politicians and bureaucrats to pass the "jurisdictional buck" back and forth, most often behind closed doors without the public's input.

As should be well-known by all Canadians at this point, the Constitution of Canada has two distinct parts; the *Constitution Act*, 1867 contains the division of powers between the federal and the provincial governments and the *Constitution Act*, 1982, contains the Canadian Charter of Rights and Freedoms. Both parts affect the manner in which environmental regulation can be implemented. The division of powers provides the blueprint for which level of government is entitled to regulate in any specific subject matter, while the Charter constrains the manner in which each government can apply their laws to individuals.

The division of powers presents the largest obstacle to a comprehensive federal environmental regulatory framework, although many hold the opinion that this obstacle is more perceived than real.[3] A growing body of scholarly papers have addressed the constitutional division of powers over the environment, indicating at the very least the

profound concern that the constitution should not limit the ability of Canadian governments to adequately regulate environmental matters.[4] Furthermore, the balance of these writers affirm the necessity for a strong federal role in environmental management.

That the enactment of CEPA was intended to provide this strong federal role in relation to the regulation of toxics is not disputed.[5] Similarly, it is not disputed, at least by the environmental community and some constitutional scholars, that CEPA has not lived up to its potential in terms of the ecological necessity to provide comprehensive management of toxics in the Canadian environment.[6] Finally, it is clear that the constitutional mandate of CEPA should be reviewed in light of the imperative of a pollution prevention approach.[7]

What follows is a brief discussion of general constitutional law principles as well as a brief overview of the most important federal powers over the environment. The general principles provide the basis rules for constitutional interpretation and are provided here to demonstrate that such interpretation is not a simple question of deciding whether an impugned provision or regulation is local or national in scope.[8]

1) General Principles of Constitutional Law

i) The Nature of the Division of Powers

Theoretically, most of the division of powers pursuant to sections 91 and 92 of the Constitution Act, 1867 are supposed to "exhaustive" and "exclusive"; meaning that in respect of the powers enumerated therein, each government is supreme within its own sphere. As a practical matter generally, and particularly with respect to environmental matters, there is considerable overlapping jurisdiction, or "concurrency". The doctrine of concurrency allows the legislative competence of both levels of government to coexist as long as there is no direct conflict[9], and belies the notion of exclusivity.

ii) Pith and Substance

When courts are faced with the question of jurisdictional competence, the first threshold to cross is to determine the "pith and substance" of the impugned law. This inquiry leads to the determination of the most important feature of the law for the purposes of classification according to the division of powers[10]; taking into consideration both the purpose and effect of the law.

The application of the pith and substance doctrine allows one level of government to enact laws that impact substantially on matters outside its jurisdiction.[11] In such

situations, the court finds that the impact on the other government's jurisdiction is permissible as it is merely "incidental" to the constitutionally valid purpose and effect of the law.

A law which contains both federal and provincial powers can in some cases be treated as competent to both the federal and the provincial legislatures.[12] Where concurrent jurisdiction is identified, there exists the possibility for conflict between a valid federal law and a valid provincial law. Federal laws are usually paramount in the case of conflict. The question of how far one government can go in impacting another government's jurisdiction has been the subject of much judicial discussion as the lines of the division of powers can easily become imprecise, upsetting the delicate balance of power between the two levels of government.

iii) Ancillary Power

Whereas the constitutions of the United states and Australia include an "ancillary" power in the enumerated federal powers, there is no such power in the Canadian constitution; nevertheless, several courts have implied such a power.[13] Other courts have developed different tests to set limits to the encroachment by one level of government on areas of jurisdiction of the other.[14] To make this area of constitutional law more oblique, there is *obiter dicta*[15] from the Supreme Court in 1978 that supports the existence of the "ancillary" power but only with respect to the Parliament of Canada.[16] It is not clear why the articulation of such a doctrine is needed given the "pith and substance" doctrine.[17] In any event, as a general conclusion it can be said that some encroachment is allowable sometimes under some circumstances.

When a law is validly enacted, there may arise the question of whether the law validly applies to the other level of government. Such questions of interjurisdictional immunity are beyond the scope of this discussion.

iv) Paramountcy

The doctrine of paramountcy applies when there are inconsistent, or conflicting, federal and provincial laws. In such a situation, the federal law prevails, rendering the provincial law *ultra vires* to the extent that it is inconsistent or in conflict with the federal law. It must be stressed that the question of paramountcy only arises once it is determined that there are conflicting validly enacted federal and provincial laws. Otherwise, the problem of conflict is resolved without recourse to the doctrine of paramountcy. A validly enacted provincial law would have to expressly contradict a federal law for it to be defeated; that is, where "compliance with one law involves a breach of the other".[18]

2) Specific Federal Areas of Jurisdiction Pertaining to CEPA

i) Peace, Order and Good Government ("POGG")

Since the Supreme Court of Canada's decision in 1988 concerning the federal government's regulations under the *Ocean Dumping Control Act*[19], there has been renewed interest in the federal government's peace, order and good government ("POGG") clause[20]. The majority of the court held that marine pollution could be regulated by the federal government under the "national concern" branch of POGG. The majority held that marine pollution fit the national concern test of being a matter that had a "singleness," "distinctiveness," and "indivisibility" such that the provinces, even if they act in unison would be unable to effectively legislate in the area. Le Dain J., for the majority stated: "For a matter to qualify as a matter of national concern... it must have a singleness, distinctiveness and indivisibility that clearly distinguishes it from matters of provincial concern and a scale of impact on provincial jurisdiction that is reconcilable with the fundamental distribution of legislative power under the Constitution."[21]

This decision has been touted as powerful support for a federal environmental protection power; however, the court has since clarified that the environment is too diffuse a topic to be assigned to one level of government.[22] Thus, it is necessary to look at discrete areas of environmental regulation such as control over toxic substances.

The inability of the federal government to secure adequate provincial cooperation on toxics regulation to date presents strong evidence, in the context of any constitutional challenge to current and future CEPA provisions and regulations, that the provincial inability to regulate toxics requires unilateral federal action.[23] This evidence of unsuccessful efforts to cooperate on these matters of national and international importance would likely help support the federal government's assertion that federal legislation is justified under the "national concern" test.[24] Hogg goes so far to state that: "It seems, therefore, that the most important element of national concern is a need for one national law which cannot realistically be satisfied by cooperative provincial action because the failure of one province to cooperate would carry with it adverse consequences for the residents of other provinces."[25]

Moreover, the development of international law on toxics and biodiversity support that these issues have recently been recognized as matters on international importance and as such require federal regulation.[26]

The residual federal power, or POGG, has been used to fill the "gaps" in the powers divided between the federal government and the provinces,[27] as well as pertain to matters which are of "national concern".[28] The definition of matters on national concern was confirmed in the *Canada Temperance* case as follows:

"In their Lordships' opinion, the true test must be found in the real subject

matter of the legislation: if it is such that it goes beyond local or provincial concern or interests and must from its inherent nature be the concern of the Dominion as a whole (as, for example, in the Aeronautics case and the Radio case), then it will fall within the competence of the dominion Parliament as a matter affecting the peace, order, and good government of Canada, although it may in another aspect touch on matters specially reserved to the provincial legislatures. War and pestilence, no doubt, are instances; so, too, may be the drink or drug traffic, or the carrying of arms. In *Russell v. The Queen*, Sir Montague Smith gave as an instance of valid Dominion legislation a law which prohibited or restricted the sale or exposure of cattle having a contagious disease. Nor is the validity of the legislation, when due to its inherent nature, affected because there may still be room for enactments by a provincial legislature dealing with an aspect of the same subject in so far as it specially affects that province."[29]

The national concern branch of POGG was relied solely upon by the S.C.C. in three cases concerning; aeronautics[30], the national capital region[31], and marine pollution.[32]

ii) Criminal Law Power in Relation to Public Health

The constitutional validity of several important federal public welfare statutes has been upheld on the basis that the legislation was valid criminal law enacted for the protection of the health and safety of Canadians. The importance of the criminal law power in respect of the constitutionality of CEPA should not be understated. It is crucial that criminal penalties remain a part of CEPA's enforcement regime from a constitutional perspective.

The Hazardous Products Act

The Manitoba Court of Appeal upheld the constitutionality of certain provisions of the Hazardous Products Act which prohibit the selling of particular infant cribs on the ground that they were dangerous.[33]

The Food & Drug Act

The S.C.C. upheld certain provisions of the Food and Drug Act which prohibited the sale of contaminated or adulterate drugs and prohibited the sale of drugs in a false or misleading manner on the basis that the main purposes of the act were characterized as the protection of the public from adulteration and the suppression of fraud.[34]

The Clean Air Act[35]

The Manitoba Court of Appeal upheld the constitutional validity of the Clean Air Act, which prohibited the emission of air contaminants in quantities which would constitute a significant danger to the health of persons. Simonsen J. found that "the dimensions of the health risk arising from air pollution is not proscribed by provincial boundaries. The harmful ingredients in air pose a national health risk."[36]

The main issue in ensuring that the federal government has not used its criminal power to unlawfully usurp provincial power is the extent of the regulation and whether the legislative scheme contains prohibitions and/or the power to prohibit[37] in pursuit of some legitimate public purpose such as "public peace, order, security, health, morality..."[38]

The emerging body of scientific documentation of the adverse, irrevocable and persistent effects of toxics in the environment[39], as well as the evidence of cross-media contamination from toxics in our land, air and water, would support the submission of a very different brief by the government of Canada in 1994 to justify both prohibition of toxics and cradle-to-grave regulation of toxics[40], then would have been possible at the time of CEPA's enactment. Thus the analysis of CEPA's constitutional underpinnings must evolve in light of this new scientific reality. There can be no doubt today that inadequate regulation of toxics in Canada presents dangers to the health of all Canadians and Canadian ecosystems, as well as to other communities and ecosystems in the world.

iii) Trade and Commerce

The federal government has jurisdiction to enact laws in relation to "trade and commerce".[41] In order to limit this potentially pervasive federal power in a way consistent with the division of powers, the courts have determined that there are two prongs; "...(1) political arrangements in regard to trade requiring the sanction of parliament, (2) regulation of trade in matters of interprovincial concern."[42] It may also be that the power would include the general of regulation trade affecting the whole dominion.[43]

iv) Fisheries Power

The federal government also has power over "sea coast and inland fisheries"[44] This power allows the federal government to regulate over environmental matters that adversely affect fish. The courts have found that this power does not permit the federal government to prohibit or regulate water pollution, without there being a direct connection to the health of fish.[45] The regulation of toxics is clearly connected to the health of fish, whether the fish habitat is affected by water pollution or air deposition.

v) Taxation and Spending Powers

The federal government has the power to raise revenue through direct and indirect taxation. This taxation power potentially has many uses for environmental protection. However, the federal government's taxing power cannot be used to indirectly usurp provincial powers. Thus any use of a federal environmental "toxics" tax should be clearly associated with the federal government's toxics management program.

The federal "spending power" is not specifically enumerated in the constitution. However, the federal government can use this power to influence areas of provincial jurisdiction by subsidizing certain provincial activities and by allocating conditional grants to provinces where they follow federal rules. In the absence of a clear concurrent power over environmental protection, the use of such persuasion could be a valuable tool for environmental regulation, especially with respect to national standard setting.

3) The Canadian Charter of Rights & Freedoms

The Charter provides for fundamental rules governing relations between individuals and the government. Again, any discussion of potential Charter infringements must be dealt with in the context of specific CEPA provisions or amendments. The most likely context in which such challenges could arise is in the enforcement provisions. The Charter protects individuals' procedural rights, including the right to silence.[46] Where an accused faces loss of liberty, life or security of the person, they cannot be compelled to provide self-incriminating information.[47] This limitation on the use of self-reporting data indicates the need for administrative penalties for some violations of CEPA.

4) Conclusions

The Canadian constitution presents a challenge in the reform of CEPA. The Act must be amended in a manner which ensures adequate protection of the environment and the health of Canadians from toxic contamination, and other environmental and health matters of national and international concern, while not being potentially subject to years of constitutional litigation. The political sensitivities regarding provincial autonomy[48] must not stand in the way of needed reform. Under several heads of power, the federal government has clear jurisdiction to regulate certain environmental matters, including the matter of the establishment of national standards for the control of toxic substances in Canada.

III. FEDERAL/PROVINCIAL RELATIONS AND CEPA

As argued above, there are clear constitutional grounds for federal jurisdiction over national environmental regulation. It is also clearly the case that, under the Constitution, responsibility for environmental regulation is most properly shared between the federal and provincial governments. This section of the discussion will review first the importance of cooperative federalism. Second, the discussion will review current federal/provincial relations as acted upon, and as provided for, under CEPA. A comparison of the former with the latter discussion will show that, so far as cooperation and coordination of effort are concerned, there is a marked shortfall in what could be accomplished. This shortfall will be relevant in our discussion in the section on harmonization.

1) Cooperative Federalism

Since the early 1980s, public and political attention has focused on the question of strong national standards in Canada. These concerns arose from a variety of factors: changes in the economy including the transition from a resource-based to a post-industrial, information-based economy, increasing awareness of the disparate impacts of these economic changes on the provinces, and an inclination on the part of the federal government to decentralize power.[49] Originally these concerns had to do with the national social support infrastructure (health care, unemployment insurance, pensions), but they also extend to other national concerns such as regulation of transportation and the environment. At approximately the same time that these concerns entered discussions of law and policy, came the Brundtland Report regarding sustainable development. Our Common Future strongly advocates nationally standardized environmental regulation, understanding that uniform standards protect against the creation of "pollution havens," as well as conferring other benefits.[50]

The basic idea of cooperative federalism is that the federal government will work with the governments of the constituent units of the federation to establish uniform and equitable regulatory standards and programmes that will be applied and administered jointly by the governments of the constituent units and the federal government. Cooperative federalism may also require the transfer of resources from the central government to the constituent governments, and the transfer of resources from richer to poorer constituencies. This transfer of resources is necessary because uniform standards require uniform capacity to meet and enforce those standards. In theory, cooperative federalism allows for uniform, consistent and equal provision of services, and application of regulations, in each unit of the federation. The benefits of centralized standards and cooperative federalism are clear: equitable distribution of resources ensure a better standard of living for the nation's citizens; a consistent and consistently applied regulatory regime is more efficient and predictable and therefore, more amenable to the interests of industry and economic activity generally.[51]

In practice, Canadian federalism provides for some elements of the model, such as the national health care system and transfer payments between the federal

government and the provinces. As discussed in the second section of this paper, Canadian constitutional law establishes a legal framework within which mechanisms of cooperative federalism function.

In Canada this has meant achieving national standards without infringing unacceptably upon provincial jurisdiction. It can also mean, in its broader sense, how one can achieve the benefits of national citizenship or policy harmonization without losing the benefits of more effective and efficient program delivery by the provincial or local levels of government.[52] The question of "infringing unacceptably upon provincial jurisdiction" has coloured much of the debate around cooperative federalism in the realm of environmental protection.

2) Uncooperative Federalism and Environmental Protection

There is a disconcerting consensus in discussions of the matter that the provinces resent federal intrusion in the realm of environmental regulation because the provinces were "there first." The consensus is disconcerting because, as "murky" a medium as Canadian constitutional law is, there is nothing in it to support the assertion that jurisdiction over a particular matter belongs to whoever gets "there first." Still, the claims are made:

> "In the short term, the expansion of environmental activities by both levels of government in the late 1980s has led to overlap and increased tension. CEPA was a major contributor to this tension, since it proclaimed a more interventionist federal presence in what had traditionally been largely a provincial domain of activity."[53]

And again:

> "The overall result [of CEPA] is a federal move into environmental protection territory that was previously regarded as largely, if not exclusively, provincial."[54]

The matter of jurisdiction has already been discussed in this paper, and the issue of the putative problem of duplication will be discussed below in the section dealing with harmonization. The rest of this part of the discussion will review the mechanisms under (and in the general vicinity of) CEPA that have attempted to deal with the aversion of the provinces toward the federal government stepping into their regulatory back yard.

i) Equivalency Agreements under CEPA

The equivalency agreements provided for under s. 34 of CEPA were enacted in

response to provincial objections to federal intrusion on an area they already regulated.

> "Flexibility was introduced. [Under equivalency agreements] CEPA regulations, but not the entire Act, would draw back and not apply in provinces where it is agreed in writing between the federal minister and the provincial government that provincial laws are equivalent."[55]

Responses outside of governments to these provisions has been mixed. Some argue that equivalency agreements serve as a "roadblock" to effective, national regulation of toxics and will result in a patchwork of provisions across the country.[56] Others are more optimistic and see the potential in the equivalency agreement provisions for true harmonization of national toxics regulation.

But for the recent publication of the Alberta Equivalency Order, these discussions would be rendered moot by the fact that no province has, until now, entered into an equivalency agreement with the federal government.[57] RFI indicates that negotiations for other agreements have been ongoing for some time, however.[58] Equivalency has been a tough regulatory nut to crack for a number of reasons, only one of which is provincial disinclination to cooperate. RFI cites several problems that have been encountered on the way to equivalency: provincial incapacity to meet the equivalency criteria of sections 108 and 109 of the Act concerning citizen's requests for investigations; the fact that the federal government took more time than expected to put toxics regulations in place; the cost of formulating and implementing equivalency agreements; and the difficulty of determining what, exactly, "equivalent" means.[59]

Although equivalency agreements were to have been a concession to the provinces, RFI notes that "[t]he CEPA provision for equivalency agreements is clearly an irritant in federal-provincial relations."[60] The comments collected by RFI from provincial officials regarding equivalency reflect this:

> "Several provinces expressed their reluctance to change their laws, their priorities or the way they did business "just because the federal government wants to do things differently." They chafe at having to develop equivalent procedures and argue that greater emphasis should be placed on achieving equivalent results instead....They complain about being forced to undertake activities they would have chosen not to carry out....At least four provinces state that they do not intend to negotiate equivalency agreements...[which] reflects more an unwillingness to change their regulatory approach and a skepticism about the federal government's ability to go it alone than an implicit acceptance of the federal role. One provincial official sums up the attitude of several of his colleagues this way: 'Let's stand back and watch them try to enforce all these regulations."[61]

The federal government has apparently softened its stance on equivalency, and appears to be bending more toward "equivalency of effect" provisions as opposed to identical provisions in provincial regulations, which may serve to deal with some of the complaints.

However, the other complaints expressed -- the aversion to doing things differently, being forced to undertake tasks not currently undertaken, and the aversion to "all these regulations" -- suggest a completely different kind of problem than federal "arrogance" or strict insistence on the requirement of equivalence.[62] These complaints indicate that the requirements of CEPA are more than some provinces are willing to implement and enforce. At a time when cooperation seems more important than ever, the stance of these provinces is problematic. The impact that this demonstrated provincial reluctance will have on national standards under the harmonization initiative will be discussed below.

ii) Administrative Agreements under CEPA

RFI reviews the main elements of administrative agreements under CEPA:

> "Section 98 of CEPA provides for bilateral federal-provincial agreements with respect to the administration of the Act. Administrative agreements represent "work-sharing" partnerships for the cooperative and reciprocal management of toxic substances under the authority of both federal and provincial legislation. The agreements aim to eliminate overlap and duplication and to provide a "one-window" approach to industry. In order to maintain ministerial accountability under CEPA, administrative agreements will provide information-sharing and other mechanisms to allow the federal government to verify industry compliance with federal regulations. The federal government reserves the right to intervene directly if federal requirements are not being met."[63]

RFI also notes that "administrative agreements do not have to meet the tough tests that equivalency agreements do."[64] While no administrative agreements have been signed to date, four are, apparently, "ready for signing."[65] Administrative agreements do not appear to irritate the provinces as much as equivalency agreements, but RFI notes some provincial officials' suspicion that "the federal government wants the provinces to do things 'the federal way.'"[66]

iii) Intergovernmental Agreements

While there are no administrative agreements, and only one equivalency agreement currently in force in Canada, Franklin Gertler notes that:

"Environment Canada is party to several hundred intergovernmental agreements...To these agreements must be added certain orders in council that purport to delegate administrative and law enforcement authority."[67]

The fundamental problem posed by some of these agreements to the principle of the rule of law and meaningful accountability to the public for their contents is that:

"Law and policy for environmental protection in Canada are being articulated and implemented in some considerable measure through an obscure intergovernmental process that is inaccessible to the public and almost unknowable...This process often culminates in intergovernmental agreements and largely escapes both legislative control and judicial review."[68]

On the one hand, as reviewed above, there are many benefits to be gained nationally from co-operative federalism, but it can also have seriously detrimental effects:

"...while agreements may be in the interest of executive government they may be contrary to the interest of the individual citizen and may undermine such important values as accountability and responsiveness."[69]

Gertler offers as an example of the problems of "bureaucratic administrative federalism" the 1987 "Canada-Alberta Fisheries Agreement", that played an important role in the Oldman River Dam controversy:

"When [citizens] wrote to the Minister of Fisheries and Oceans demanding the application of the [*Environmental Assessment and Review Process Guidelines Order*] on the grounds that effects on fish habitat and fisheries were federal matters and the responsibility of the department, the Minister refused, in large part on the basis of "long-standing administrative agreements."...The correspondence in the Oldman litigation demonstrates several dangers associated with intergovernmental agreements delegating the administration and enforcement of federal environmental law. First, the general spirit of the agreements is such that federal officials will defer to the scientific evaluations and decisions of provincial authorities. Second, while lip service is paid to ongoing federal involvement and responsibilities, the administrative arrangements are regarded as precluding federal enforcement action...Finally, there are no remedy or appeal provisions in such agreements."[70]

Intergovernmental agreements provide the opportunity for the provinces and the federal government to forget their differences and come to agreement. However, when the two levels of government have in the past managed to agree on environmental protection in this fashion, the agreements have all the appearance of agreeing to do little.

In delegating its authority under these agreements, the federal government appears to actually abandon its responsibilities, leaving the province more-or-less free to do as much, or as little, as it wishes with its delegated authority. The ramifications of this behaviour will be discussed below in more detail in the context of "harmonization."

iv) Reforming the Use of Intergovernmental Agreements Through CEPA

Gertler argues that a separate act dealing with intergovernmental agreements should be made into law. However, specific provisions dealing with intergovernmental agreements could also be made part of CEPA. These new sections might provide that:

* the intention to negotiate an intergovernmental agreement is made public, through pre-publication, public consultation, and the publication of draft agreements in Part I of the *Canada Gazette* with an appropriate comment periods;

* once agreements have been concluded, they be published in the *Canada Gazette* part II and indexed;

* all agreements require *detailed* annual reporting to Parliament on the administration and enforcement of federal laws or equivalent provincial laws; and

* all agreements have sunset clauses requiring periodic review.

In addition, the federal government should always retain its right to prosecute under federal statutes when entering into such agreements. Mechanism permitting citizens who believe that enforcement by provincial officials is inadequate to petition for federal enforcement or to undertake private prosecutions, should also be included in agreements.[71]

3) Federal/Provincial Advisory Committee

Section 6 of CEPA provides for the creation of a Federal/ Provincial Advisory Committee

> "...for the purpose of establishing a national framework for national action and taking cooperative action in matters affecting the environment and for the purpose of avoiding conflict between, and duplication in, federal and provincial regulatory activity..."

According to the CEPA Annual Report 1992-1993:

> "Representatives from Environment Canada, Health Canada and each of the

provinces and territories compose the Federal-provincial Advisory Committee (FPAC). This group ensures that the federal and provincial governments consult with each other and take action together to protect the environment form the effects of toxic substances. FPAC also aims to achieve nationally consistent environment standards."[72]

The Annual Report notes that the action undertaken by FPAC so far has been the creation of several FPAC working groups (Ozone-Depleting Substances, Air Quality Guidelines, and CEPA Partnerships). Whether these working groups "ensure" federal-provincial consultation and action to protect the environment from the effects of toxic substances is not clear.

What is clear in the brief RFI review of FPAC is that the Committee does provide the provinces with something else to complain about:

> "Interviews with FPAC members and a review of the minutes of FPAC meetings indicate a general satisfaction with the Committee's operations. It is important, however, not to confuse this satisfaction with provincial acquiescence with the status quo. At least two provinces question whether FPAC should continue to exist; their scenario for CEPA reform, which includes a more modest role for the federal government, has the Environmental Protection Committee of CCME playing the necessary federal-provincial coordinating role."[73]

As will be discussed in detail below, the Canadian Council of Ministers of the Environment (CCME) may already be playing the "necessary federal-provincial co-ordinating role." Whatever role FPAC plays, it appears to be diminishing in importance to the provinces and territories, as suggested by the fact that the committee has never achieved its original plan to meet four times a year.[74] The Committee now meets twice a year, but, at the spring, 1993 meeting, only seven of twelve provincial and territorial representatives attended.[75] The reason offered for the reduced number of meetings, and the reduced number of attendees at the meetings is the expense.[76] A better explanation might be that the work statutorily created for FPAC is understood by the provinces and the territories as being done by another body, the CCME.

4) Canadian Council of Ministers of the Environment (CCME)

In current discussions of interjurisdictional cooperation and harmonization of federal/provincial environmental regulation, FPAC is never mentioned; the CCME, however, is. The Council, comprised of the federal, provincial and territorial Ministers of the Environment, has existed in one form or another since the early 60's. Its current form came into being in 1989. As for the Council's activities, this is what its brochure says:

"The Canadian Council for the Ministers of the Environment (CCME) is the *major inter-governmental forum in Canada for discussion and joint action on environmental issues of national and international concern*. The Council is made up of environment ministers from the federal, provincial and territorial governments. These 13 ministers normally meet twice a year to discuss *national environmental priorities and determine work projects to be carried out under the auspices of CCME*."[emphasis added]

The CCME, so far identical to FPAC in every way, save that it includes the federal Minister of the Environment, differs from FPAC in that it has a wider mandate (FPAC is bound to matters dealing with toxics under CEPA, while CCME has no statutory bounds to the environmental matters it may apply itself to) and it has a permanent Secretariat office in Winnipeg (funds for the office are supplied jointly by the provinces and territories, based on population; the federal government provides one third of the funding). Quite unlike FPAC, which forces the provinces to acknowledge a subordinate status to the federal government, the unique nature of the CCME puts the provinces "in a stronger position to resist federal proposals."[77]

The CCME appears to be one of the best hopes in Canada for achieving cooperative federalism in environmental regulation. The question that must be asked, however, is whether the CCME represents the beginning of a new cooperative federalism in Canadian environmental regulation based soundly on principles of constitutional law, or represents another version of the "bureaucratic administrative federalism" described by Gertler.

IV. HARMONIZATION

1. Introduction

Until it adopted its new form in 1989, the CCME was an obscure, relatively uninfluential, purely political body that allowed off-the-record interaction between Canadian Ministers of the Environment. However, "the Council's long-established norm of consensual decision-making" has evidently strengthened "the provinces' ability to constrain federal involvement, particularly in joint ventures."[78] This is why "revitalization of the Council was consciously pursued by some provinces as a means to establish a credible alternative to federal policy-making."[79] This may also be why the provinces and the federal government have chosen the CCME as the forum within which to work toward harmonization.

Harmonization is not an initiative under CEPA. However, as harmonization will have a tremendous impact on all environmental regulation in Canada, it is important that it be discussed in the context of CEPA review.

The equivalency agreements under CEPA were intended to achieve harmonization -- that is, they were supposed to eliminate duplication and overlap of laws emanating from different levels of government. They were also, in theory, to establish consistent, minimum standards for environmental protection nation-wide. The imperative of reducing overlap and duplication remains at the heart of the new harmonization imperative, although now there is more at stake than simple efficiency:

> "Protection of the environment, while remaining vitally important to Canadians, must now be seen in a broader context. A context that includes maintenance of jobs and social programs, expenditure control, greater public participation in decision making and the globalization of economic and environmental considerations....
>
> ...Canada's Ministers of the Environment have recognized these changing trends and have concluded that the way in which we manage our environmental responsibilities has to change. They believe that a window of opportunity exists to undertake a fundamental review of Canada's environmental management regime and to establish a new regime based on cooperation, and a more effective definition of roles, responsibilities and capacity to act. They believe that our environmental protection objectives can be best met through a new management regime."[80]

Toward creating that new management regime, the Ministers established a Task Group to define the scope of and develop a process leading to a Management Framework for Canada's Environment.[81] The Task Group proposes that the purpose of the harmonization initiative should be:

> "to develop a new Management Framework for Canada's Environment, based upon cooperation and an effective and efficient definition of roles and responsibilities, that will lead to and enhance the maintenance of a consistent and high level of protection of Canada's environment."[82]

The Task Force also proposes a number of objectives and principles that should guide the development and implementation of the Framework. Attention should be drawn to the fact that the proposal scrupulously avoids mention of the words "law", "regulation", "statute" or anything that might suggest legislative or parliamentary involvement, or attract the requirements of public notice and publication in the Gazettes. The whole plan is proposed as a "management framework", and will result in an intergovernmental agreement the form of which has yet to be determined, although it may be roughly similar to one recently signed in Australia.[83]

2) Questions and Concerns Regarding the "Harmonization" Exercise

If the resulting intergovernmental agreement is to be similar to the ones discussed above, then the proposal must raise serious concerns. Harrison notes that the provinces have worked to revitalize the CCME because it has strengthened their ability to "constrain federal involvement", and provides an "alternative to federal policy making." Will the harmonization agreement -- as did the Canada/Alberta Fisheries Act agreement -- also result in an "alternative" to federal enforcement of federal laws? In the absence of federal enforcement under the harmonization agreement, will the provinces be free -- as Alberta was -- not to follow federal legislation?

These questions, and other concerns, arise from four aspects of the plan in particular:

i) the focus on the issues of "efficiency" and "duplication and overlap," as opposed to environmental protection;

ii) the proposals that "roles and responsibilities" be determined on the basis of "effective use" of labour and capacity and not, apparently, on the basis of legally defined responsibilities under the Canadian constitution;

iii) the potential for the intergovernmental dynamics of the harmonization exercise, particularly in the context of a weak federal role, to generate a "race to the bottom" in terms of environmental standards; and

iv) the emphasis on "partnerships" with regulated sectors in the implementation of a "harmonization" agreement.

In sum, the harmonization initiative's objectives of clear, effective national standards for environmental protection and of interjurisdictional cooperation are worthy of support. However, there is a concern that, in an effort to achieve harmony, efficiency and standardization, the initiative might lose sight of the requirements of the Constitution and the rule of law. It may also lose sight of the goal of effective environmental protection.

i) "Duplication and Overlap" and the Goal of "Efficiency"

The ineffective implementation and enforcement of federal environmental laws have been reviewed elsewhere in this submission. Our conclusion in that section was that the failure of the legal regime to achieve much in the realm of environmental protection had more to do with lack of political will -- as evidenced by an under-funded, inadequately trained and imprecisely mandated Department of the Environment -- than any inherent flaw in the legislation. Given that there is very little federal environmental law to enforce, and very few people to enforce it, the repeated claims of "duplication" are mysterious. What, exactly, is being duplicated? Where, in a regulatory environment where the federal government acts on only three (of twenty) regulations, is there overlap?

Clear evidence of the existence and the detrimental effects of "duplication and overlap" on industry, the public and the environment should be provided, as there is a serious concern that the ultimate effects of the harmonization exercise, as presently conceived, may be lower environmental standards, less regulation and less effective enforcement. This concern is reinforced by the description of the second objective of the exercise, which is to "lead to greater clarity, predictability and certainty in government decision making processes." This objective is more fully explained:

> "The public and the business sector will be assured of more predictable and consistent environmental decision making. This will facilitate decision making by companies that operate in more than one jurisdiction and will help ensure that the public will not have to deal with duplicative processes. Both the public and the private sector will face reduced costs and will bear a lighter regulatory burden."[84]

It is not clear how "the public" has to deal with "duplicative processes." Indeed, members of "the public" currently deal with a dearth of processes that allow them to work to protect the environment. Complaints about "duplicative processes" and the current "regulatory burden" are chiefly made by business interests. The concerns of industry are valid and important. However, as presently conceived, harmonization appears to privilege these interests over others, which casts some doubt on how much the initiative can or will serve the interests of the Canadian public and the environment.

ii) The Division of Roles and Responsibilities

While there is not a lot of law in Canada regarding the delegation of powers, what little there is is clear: constitutionally identified legislative powers may not be delegated.[85] As argued elsewhere in this paper, the division of powers provides significant protection for the environment and for the rights of Canadians. But, were one to deviate from the recognized, legal, mechanisms in the name of efficiency and harmonization, one would "[blur] the effective division of powers and [render] ineffective existing mechanisms for legal control over government."[86] The harmonization initiative must, therefore, not lose sight of the requirements of Canadian constitutional law.

Unfortunately, there are indications within the objectives and principles of harmonization that "lose sight" is just what the Task Force has done. It is difficult to disagree with the Task Force's conclusion that "efforts to address environmental issues through changes to the Constitution are not...an effective method for cooperation at this time."[87] Indeed, it is far from clear that changes to the Constitution are even necessary to provide for effective environmental management in Canada. However, the criteria proposed by the Task Force for the division of roles and attribution of responsibilities appear to take no notice at all of what the Canadian constitution requires.

The first of a number of these troubling principles states:

> "The Framework will establish clear definition of responsibility, in particular those areas of exclusive responsibility.
>
> Elimination of duplication, overlap and jurisdictional disputes will begin with reaching consensus on areas where exclusive responsibility can be assigned."[88]

However, much of this work has already been done for the Task Force -- in 1867, when the *British North America Act* became law, and set out in sections 91 and 92 what were the areas of exclusive responsibility of the federal and provincial governments. The Task Force appears to be suggesting that the Ministers achieve by "reaching consensus" something other than what is already written in the Constitution. This principle, therefore, seems to propose either constitutional reform, or illegal delegation. As the Task Force clearly states that constitutional reform is not an option, there must be a concern whether the results "reached by consensus" will conform to the existing constitutional division of powers legal.

The list of principles goes on:

> "Areas of shared responsibility will be identified and minimized while recognizing regional variation and the need for flexibility and capacity building...The division of roles and responsibilities will be based upon the most effective use of labour, resources, expertise and capacity."

Again, the point that the consideration of where roles and responsibilities lie must be based on a close reading of the Constitution must be emphasized. All of the other considerations -- as valid, and as sensible as they appear to be -- must be secondary. Otherwise the Framework will have no foundation in law and cannot stand.

iii) National Standards and the Dynamics of Harmonization

Harmonization includes the stated principle that "Consistent national standards will be developed and maintained."[89] The creation, implementation and enforcement of strong national standards for environmental protection is an important principle. Standardization may result in the efficiencies of fewer, clearer, regulatory requirements and potentially the efficiency of a "single window" of monitoring and enforcement activities. It is not clear, however, how such standards will be achieved under the harmonization exercise.

First, let us examine the foundation the harmonization initiative has to build on. The evidence presented by RFI in its report, and, generally the history of federal/provincial

relations in matters of environmental regulation, indicate a lack of consensus that has to date rendered the achievement of consistent national standards all but impossible. The Task Force acknowledges that implementing harmonization requires "a commitment to cooperation that has not been evident to date."[90]

Harrison describes the dynamic of disagreement between the provinces and the federal government as the "regulator's dilemma".[91] This discussion has touched on some of the elements of the dynamic: the federal reluctance to regulate or impose itself on the provinces in spite of its clear authority to do so; the provincial resentment of any federal intrusion on environmental regulation (or, more accurately, as Harrison notes, federal intrusion on provincial resource management). Add to these elements the facts that some provinces, Ontario, Alberta and British Columbia primarily, and Quebec to a lesser extent, have over the past decade actually competed with one another in the establishment of tough regulatory programmes and well-organized, well-funded enforcement branches in their Ministries of the Environment. Other provinces have not been able to participate in these competitions because of lack of resources.

The provinces with their own strong laws and strong enforcement practices are more inclined to support national standards: if every province upholds strong standards, there will be less likelihood of capital flight to provinces where regulations are not as strict. The weaker provinces oppose strong national standards because they are disinclined to commit the resources to enforce higher standards.

Harrison studies an actual incident where this dynamic had an opportunity to play itself out in full: the formulation of the federal pulp mill dioxin and furan emissions regulations. At a time of high public concern about the presence of dioxins in pulp mill effluent, the federal government undertook to set new regulations under CEPA. Harrison's comments describing the "end game" before the regulations were finally set are illustrative of our concerns, and bear quoting at length:

> "Since the dioxin issue coincided with the ... wave of environmental concern, provincial governments were eager to prove that they were not only doing a good job, but a better job than their neighbours. The resulting competition between Ontario, Quebec, Alberta and British Columbia to claim the most stringent standards probably resulted in tighter regulations for the pulp and paper industry, at least in the larger provinces....[But] when it came time to follow through on promises, provinces that had been eager to distance themselves from their neighbours in voters' eyes became quite eager to harmonize federal and provincial standards from the perspective of the regulated industry...Perhaps the most striking conclusion...is the weak role of the federal government...In addition to industry resistance, the federal government also faces resistance form provinces defending their own mills and their jurisdiction. It is striking that on occasions where some provinces were pressing for more stringent federal standards, it was the

> defensive provinces to which the federal government deferred. Thus, in many respects, the new federal regulations reflect the lowest common denominator among the provinces, rather than reinforcing the position of more stringent provinces."[92]

The first important pattern of governmental behaviour to note is that governments generally attend to environmental issues only in the context of high public concern about the environment. In times of low public interest, government activity correspondingly declines.[93] The second important pattern -- competition between jurisdictions in regulation-setting -- is attached to the first pattern: politicians take strong stances on environmental protection when there is political capital to be gained from doing so. The third important pattern to note is that, once the opportunity for political gain has passed, so too does the governmental resolve to regulate. Insecurity about the effects of strict regulation on industry sets in, and the provinces with strong regulations start to talk about "harmonization." The fourth, and final, pattern is unique to the federal government. While Harrison finds it "striking" that the federal government capitulated to the lowest common denominator, this seems entirely consistent with the general pattern of federal regulatory activity, or, more accurately, lack thereof in the environmental field.

There are parallels between these patterns of behaviour and the harmonization initiative, as well as some inconsistencies. One glaring inconsistency is that, although virtually all environmental regulation has arisen in whole or part as a response to citizen concerns about the environment, the harmonization initiative has arisen without the help of marked public concern. Rather, it is generally accepted that the recession of the early 90s has focused public attention on other matters.[94] Recall that the Task Force mentions in the Principles and Objectives paper that the Ministers of the Environment believe that a window of opportunity exists to undertake a fundamental review of Canada's environmental management regime and to establish a new regime based on cooperation, and a more effective definition of roles, responsibilities and capacity to act.[95]

Is this "window of opportunity" the current public inattention to the environment? If so, and if the patterns described above work in reverse, then one should be concerned that, in the absence of strong public interest in the environment, governments may take the "opportunity" to downgrade environmental protection laws.

Public preoccupation with other concerns links harmonization with the second pattern of governmental behaviour. In a time where there is little political capital to be gained from taking a strong stance regarding environmental protection, it follows that there is little to be lost if environmental laws are eroded. This is particularly true if other concerns provide alternative sources for gaining political capital. These concerns are outlined by the Task Force: "fiscal constraints, [and] demands for deregulation[96]...concerns over the competitiveness of Canadian industry, serious reductions in government expenditures at all levels and increased public concern about

the public debt issue and government inefficiency."[97] One could reasonably surmise that the political gains to be made by meeting these concerns will more than compensate for whatever, limited, losses may arise from whittling away at environmental standards.

However, it should be noted that while the environmental concerns of the Canadian public are not necessarily top of mind, they have neither disappeared completely. Harrison notes that the environment has become a "core issue" for Canadians, and is something they are always generally concerned about, even if other issues take occasional priority.[98] A general awareness of this fact on the part of Canada's Ministers of the Environment may account for the comparatively low profile of the harmonization initiative.

The harmonization initiative exactly parallels the third behaviour pattern described above. As already noted, harmonization is primarily concerned with the interests of industry, and the interests of government in keeping industry in Canada, which is analogous to the concern the "competing" provinces had once the competition over pulp mill regulations had settled down. Their worry then was the regulatory disadvantage they had created for themselves. The analogous concern for harmonization is the "competitiveness of Canadian industry." The harmonization initiative expressly targets "competitive standard setting" as something it will work to avoid. It will avoid competition by setting national standards at a level reached by consensus.

The stated goals of setting standards by consensus and avoiding competitive standard setting are completely at odds with well understood dynamics of policy innovation in federal systems. In federal systems, new policies are usually first developed and adopted at the state or provincial level, and then implemented nationally. The "anti-competition" element of the CCME proposal has the potential to significantly constrain the capacity of individual provinces to raise standards and experiment with innovative policy approaches in the absence of the consent of their partner governments in the federation.[99]

The fourth pattern indicates what will be the likely result of consensus-based standard-setting. The patterns that played themselves out over the pulp mill regulations will repeat themselves. The larger, richer provinces with high standards will push for standards like their's across the country. The provinces with lower standards, and fewer resources to enforce them, will have no interest in raising standards. The federal government, for all that it plays a lesser role in the forum of the CCME, will have to have the final say. And that say will be to set the standards in line with the poorer provinces. The national standards achieved by harmonization will be whatever the lowest standards are now. This result is inevitable so long as the federal government is unwilling to press the provinces to do anything more than what the least active province is prepared to do.

A "race for the bottom" does not have to be the inevitable result of harmonization. The fourth pattern of behaviour can and should be modified. The federal government can

assert the authority it has to ensure environmental standards are not eroded.

iv) "Partnerships" and the Uncertain Role of the Public

One of the stated principles of the initiative is that "the development of the Framework will include an effective stakeholder involvement and consultation process." The annotation elaborates:

> "While the Framework is essentially a government to government initiative, public and stakeholder support will be essential to its success. Partnerships between governments and stakeholders will be developed."[100]

This raises at least two questions. First, what happens after the Framework has been developed? Second, which stakeholders have the resources and are therefore the most likely to develop partnerships with the governments, and what will the effect of those partnerships be on regulation and enforcement?

Regarding the first question, recall Franklin Gertler's arguments reviewed above. Remember, in the Oldman River Dam controversy, that after Alberta and the federal government came to their agreement about administration of the Fisheries Act, the public found virtually no toe hold to force either government to comply with the law. Public review, opportunity to comment and opportunity to compel enforcement of the provisions of the agreement, as provided for in Gertler's recommendations below, are necessary in order to prevent this circumstance from arising again.

Regarding the second question, the strengthening of "partnerships" between the government and stakeholders raises serious problems. As already discussed, harmonization currently privileges the interests of industry; "partnerships" between industry stakeholders and the government will further exacerbate this imbalance. Furthermore, the role of government is to regulate and enforce; "partnerships" will confuse and distort this role, and, as experience as shown, will make enforcement more difficult, if not impossible.[101]

3) Conclusions

In light of the seriousness of the four concerns reviewed above, it is difficult, if not impossible, to endorse the CCME harmonization exercise as presently conceived. The justification presented in support of the effort (duplication and overlap) has yet to be fully demonstrated as a serious problem. In addition, the constitutional propriety of some of what is proposed as part of the exercise is open to serious question. Furthermore, the dynamics of the harmonization process among the provinces may lead to a "race for the

bottom" and the adoption of "lowest common denominator" standards.

The likelihood of such an outcome is reinforced by the emphasis placed in the process on the concerns of business interests, and the weakness of the federal government's role as promoter of strong national environmental standards. The capacity of the process to result in constraints on the ability of provinces to raise standards independently and to adopt innovative policy approaches is also a serious matter. Finally, the process as presently conceived insufficiently provides for meaningful public participation before and after the "management framework" is agreed upon and made.

V. CONCLUSIONS AND RECOMMENDATIONS

1) Constitutional Jurisdiction and The Federal Role in Environmental Management

The federal government's jurisdiction over toxics is well-supported under several federal heads of power, some of which can provide needed constitutional support to others. The federal government's power to enact criminal law in respect of health, the peace, order and good government clause, the fisheries power, the spending power[102], the trade and commerce power, and the taxation power, separately and combined, provide the federal government with ample jurisdiction to enact minimum national environmental standards.

RECOMMENDATION

In order to ensure that nothing in CEPA prevents a broad reading of the federal government's environmental jurisdiction, in particular its capacity to set minimum national standards, the Preamble of CEPA be amended to explicitly state that:

> *"...Whereas the Government of Canada in demonstrating national leadership should establish national environmental quality objectives, guidelines, codes of practice and standards..."*

2) Intergovernmental Agreements

Intergovernmental agreements are a potentially useful mechanism for facilitating federal-provincial cooperation in environmental management. However, concerns exist regarding the extremely weak accountability mechanisms associated with the use of these agreements.

RECOMMENDATION

CEPA should be amended to provide that:

* *the federal government's intention to negotiate an intergovernmental agreement is made public, through pre-publication, public consultation, and the publication of draft agreements in Part I of the Canada Gazette with appropriate comment periods;*

* *once agreements have been concluded, they be published in the Canada Gazette part II and indexed;*

* *all agreements require detailed annual reporting to Parliament on the administration and enforcement of federal laws or equivalent provincial laws;*

* *all agreements have sunset clauses requiring periodic review; and*

* *all agreements should permit the federal government to retain its right to prosecute under federal statutes when entering into such agreements. Mechanism permitting citizens who believe that enforcement by provincial officials is inadequate to petition for federal enforcement or to undertake private prosecutions, should also be included in agreements.*

3) Harmonization

The "harmonization" process currently underway under the auspices of the CCME raises a number of serious concerns, and cannot be endorsed in its present form. The justification presented in support of the effort (duplication and overlap) has yet to be fully demonstrated as a significant problem. In addition, the constitutional propriety of some of what is proposed as part of the exercise is open challenge. Furthermore, the dynamics of the harmonization process among the provinces may lead to a "race for the bottom" and the adoption of "lowest common denominator" standards.

The likelihood of such an outcome is reinforced by the emphasis placed in the process on the concerns of business interests. The capacity of the process to result in constraints on the ability of provinces to raise standards independently and to adopt innovative policy approaches is also a major concern.

However, perhaps the most serious flaw in the harmonization project is the underlying potential for the federal government to abdicate any meaningful role in environmental management in Canada. The federal government appears willing to limit itself to whatever role the provinces regard as being appropriate for it. Furthermore, the

federal government appears to be distinctly unwilling to press the provinces to adopt standards or requirements beyond which they would be prepared to act upon on their own initiative. This raises questions regarding the federal government's future role in domestic environmental policy.

The federal government must affirm the fact that it is interested in what happens to Canada's environment and will intervene to the full extent of its jurisdictional capacity when it feels it is necessary to do so. The establishment of minimum standards for environmental protection within Canada is clearly provided for by CEPA and other federal statutes. It is now up to the federal government to demonstrate the political will necessary to effectively fulfill these responsibilities.

ENDNOTES

1. Environment Canada. Reviewing *CEPA*: An Overview of the Issues (Ottawa: Environment Canada, 1994)

2. The general principles we elaborate herein are meant to provide a road map for constitutional interpretation in the context of specific issues, should any arise during the review of *CEPA*.

3. See for example, T. Vigod and R. Lindgren, Overview of Federal Law, Regulation and Policy (Toronto: The Canadian Environmental Law Association)

4. See for example; Rodney Northey, "Federalism and Comprehensive Environmental reform: Seeing beyond the Murky Medium," Osgoode Hall Law Journal (1989), Vol.29, No.1, p.127; D.P Emond, "The Case for a Greater Federal Role in the Environmental Protection Field" (1972) 10 Osgoode Hall Law Journal 647; D. Gibson, "Constitutional Jurisdiction over Environmental Management in Canada" (1973) 23 U.T.L.J. 54; D. Tingley, ed., Environmental Protection and the Canadian Constitution (Edmonton: Environmental Law Centre, 1987) including A.R. Lucas, "Natural Resources and Environmental Management: A Jurisdictional Primer," p. 31; A.R. Lucas, "Case Comment on R. v. Crown Zellerbach Canada Ltd." (1989) 23 U.B.C.L.Rev. 355; D. Gibson, "Environmental Protection and Enhancement under a New Canadian Constitution," in Beck and Bernier, eds., Canada and the New Constitution (Montreal: The Institute for Research on Public Policy, 1983); Mains, "Some Environmental Aspects of a Canadian Constitution", (1980) 9 Alternatives 14; R. Lindgren, "Toxic Substances in Canada: The Regulatory Role of the Federal Government," in Into the Future: Environmental Law and Policy for the 1990s (Edmonton: Environmental Law centre, 1989); P. Muldoon and B. Rutherford, Environment and the Constitution: Submission to the House of Commons Standing Committee on Environment 1991 (Toronto: The Canadian Environmental law Association, Brief No.200); and P. Muldoon and B. Rutherford, "Designing an Environmentally Responsible Constitution," 18 Alternatives No.4, May/June 1992; and B. Rutherford, "The Constitutional Division of the Environment: A Comment on the Oldman River Decision", National Journal of Constitutional Law, Vol.2, No.2, July 1992.

5. *CEPA*'s preamble is evidence of this, declaring among other important environmental facts of life that "....the presence of toxic substances in the environment is a matter of national concern;" that "...toxic substances, once introduced into the environment, cannot always be contained within geographic boundaries;" and that "..the Government of Canada in demonstrating national leadership should establish national environmental quality objectives, guidelines and codes of practice."

6. CELA, Overview of Federal law, Regulation and Policy. See also R. Northey, "Federalism and Comprehensive Environmental reform," p.129; wherein it is stated that "The government retreated from regulating all toxic chemicals from cradle-to-grave..."

7. Mandating the reduction of the use, and the zero discharge, of toxic chemicals is consistent with the pollution prevention approach. Accordingly, regulation of the use of toxics in commerce must be part of *CEPA*'s mandate.

8. The veiled reference here is to the 1992 decision of the Quebec Superior Court: *The Attorney General of Canada v. Hydro-Quebec and The Attorney General of Quebec* (File No. 410-36-000024-914; August 6, 1992; Andre Trotier, J.S.C.)

9. Where there is conflict, the doctrine of paramountcy is invoked. federal laws are always paramount to, that is take precedence over, provincial laws.

10. Peter Hogg, Constitutional Law of Canada, (Toronto: Carswell Company of Canada, 2nd. ed., 1985), p.314.

11. Ibid.

12. This is known as the "double aspect" doctrine; but the courts have not made it clear when it is necessary to choose between the federal and provincial features of a challenged law. Hogg, ibid., at p.317 adopts Lederman's explanation:

> ...the double aspect doctrine is applicable when "the contrast between the relative importance of the two features is not so sharp." In other words, the double aspect doctrine is the course of judicial restraint. When the court finds that the federal and provincial characteristics of a law are roughly equal in importance, then the conclusion is that laws of that kind nay be enacted by either the Parliament or a Legislature.

13. Hogg, The Constitutional Law of Canada, p.334.

14. This branch of constitutional law has developed into a truly confusing and conflicted doctrine. The S.C.C., in the span of three weeks, decided two cases which are in direct conflict. In *Multiple Access v. McCutcheon* [1982] 2 S.C.R. 161, the court upheld a federal law that impacted on provincial jurisdiction because the impact had a "rational, functional connection" with the federal law. In contrast, in *Regional Municipality of Peel v. MacKenzie* [1982] 2 S.C.R. 9, the court would not uphold an extension of the federal criminal law where it could not be shown that such an extension was "essential" to the legislative scheme. The former test is less strict and preferred by Hogg. (See Hogg, pp.334-337).

15. "Obiter dicta" are words of an opinion entirely unnecessary for the decision of the case. Such words are not binding as precedent. Black's Law Dictionary, Abridged 5th Edition, 1983.

16. In Laskin C.J.'s dissent in *A.-G. Que. v. Kellogg's of Canada* [1978] 2 S.C.R., in which the majority upheld a provincial law regulating advertising on television (television being

within federal jurisdiction) directed at children, he states that: "...in so far as the British North America Act may be said to recognize an ancillary power or a power to pass legislation necessarily incidental to enumerated powers, such a power resides only in the Parliament of Canada." (p.216)

17. As stated above, according to the pith and substance doctrine, a valid law can encroach upon areas outside the enacting legislature's jurisdiction. See *Bank of Toronto v. Lambe* (1987) 12 App. Cas. 575, and Hogg, Constitutional Law of Canada p.314.

18. *Smith v. The Queen* [1960] S.C.R. 776, p.800.

19. (S.C. 1974-75-76, c.55). The case is called *R. v. Crown Zellerbach*, [1988] 1 S.C.R. 401.

20. The opening words of s.91 of the *Constitution Act, 1867* confer on the federal Parliament the power:

> to make laws for the peace, order, and good government of Canada, in relation to all matters not coming within the classes of subjects by

this Act assigned exclusively to the Legislatures of the provinces...

21. *Crown Zellerbach* [1988] 1 S.C.R. 401, 438. Interestingly, Hogg finds the S.C.C.'s substitution in 1979 (*The Queen v. Hauser*, [1979] 1 S.C.R. 984) of the criterion of "newness" for "distinctness" (from the *Anti-Inflation Reference* and later to be referred to in *Crown Zellerbach*.) to specious. He concludes that "newness" is irrelevant and unhelpful..." See also Lysk on this point, (1979) 57 Can. Bar Rev. 531, 571-572 and *Crown Zellerbach*, 432, per LeDain J. for the majority. Hogg cautions about the reference to `newness' by LaForest J. dissenting at p.458.

22. *Friends of Oldman River Society v. Canada*, [1992] 1 S.C.R. 3, at pp.63-64.

23. The opportunity for establishing equivalency agreements under CEPA also works in the favour of justifying federal jurisdiction.

24. See Hogg Constitutional Law of Canada. In the second S.C.C. case on "national concern," *Munro v. National Capital Commission* [1966] S.C.R. 663, Cartwright J. writing for a unanimous court referred to the unsuccessful efforts to zone the national capital region through the cooperative action of the two provinces of Ontario and Quebec.

25.See Hogg, Constitutional Law of Canada 3rd. ed., s.17.3(c). The provincial inability test was referred to in *Crown Zellerbach*, *Labatt Breweries v. A.-G. Can.* [1980] 1 S.C.R. 914, 945; *Schneider v. The Queen* [1982] 2 S.C.R 112, 131; *The Queen v. Wetmore* [1983] 2 S.C.R 284, 296.

26. The United Nations Conference on the Law Of the Sea was referred to in *Crown Zellerbach*. Although the *Labour Conventions* case seemed to rule out a separate international treaty power, Hogg suggests that the earlier Radio Reference case (*Re Regulation and Control of Radio Communication in Canada* [1932] A.C. 304) holding that the federal power to perform treaties came within POGG may be finding renewed judicial favour. See Hogg, s.17.2.

27. Hogg, Constitutional Law of Canada 3rd. ed., s.17.3(a); for example, treaties, official languages and offshore resources.

28. *Canada Temperance Federation*; *Russell v. The Queen* (1882); *A.-G. Ont. v. A.-G. Can* (Local Prohibition)[1896] A.C. 348: "Their Lordships do not doubt that some matters, in their origin local and provincial, might attain such dimensions as to affect the body politic of the Dominion, and to justify the Canadian Parliament in passing laws for their regulation or abolition in the interest of the Dominion. But great caution must be observed in distinguishing between that which is local or provincial and that which has ceased to be merely local or provincial, and has become a matter of national concern, in such sense as to bring it within the jurisdiction of the Parliament of Canada." (p.361).

29. *Canada Temperance*, pp.205-206.

30. *Johannesson v. West St. Paul* [1952] 1 S.C.R. 292.

31. *Munro v. National Capital Commission* [1966] S.C.R.663.

32. *R. v. Crown Zellerbach* [1988] 1 S.C.R. 401.

33.*R. v. Cosman's Furniture* (1972) Ltd. et al. (1976), 32 C.C.C. (2d) 345 (Man. C.A.).

34. *R. v. Wetmore et al.* (1983), 2 D.L.R. (4th) 577 (S.C.C.).

35. This act was repealed by s.145 of *CEPA* Part IV of *CEPA* allows the federal government to regulate air pollution from federally controlled works, undertakings and activities such as nuclear power plants, railways and airlines. The regulation of fuels and fuel additives under the former *Clean Air Act* is now contained in ss.46-48 of *CEPA*. Part V of *CEPA* (sections 61-65) pertains to domestic sources of air pollution that have international effects. Section 61(2) codifies the "provincial inability" test and s.63(3) allows for equivalency agreements regarding federal regulations attempting to curb air pollution with international dimensions (either causing international air pollution or causing (or likely to cause) a "violation of an international agreement entered into by the Government of Canada in relation to the control or abatement of pollution." Note that the reference is to any international agreement regarding pollution, not just air pollution.

36. *Re Canada Metal Co. Ltd. and The Queen* (1982) 44 D.L.R. (3d) 124 (Man.Q.B.), pp.130-131.

37. Mere regulation of an activity is not criminal law. See *Re Information Retailers Association of Metropolitan Toronto Inc.* (1985), 22 D.L.R. (4th) 161 (O.C.A.), *City of Montreal v. Arcade Amusements Inc. et al.* (1985) 18 D.L.R. (4th), 161 (S.C.C.) and *Labatts*.

38. These decisions all applied the test in the seminal case regarding the true nature of criminal law: see *Reference re Validity of s.5(a) of Dairy Industry Act* (The Margarine Reference) [1949] 1 D.L.R. 433 at pp. 472-3. Some legitimate public purpose must underlie the prohibition:

A crime is an act which the law, with appropriate penal sanctions, forbids; but as prohibitions are not enacted in a vacuum, we can properly look for some evil or injurious or undesirable effect upon which the law is directed. That effect may be in relation to social, economic or political interests; and the legislature has had in mind to suppress the evil or to safeguard the interest threatened. Is the prohibition then enacted with a view to a public purpose which can support it as being in relation to criminal law? *Public peace, order, security., health, morality: these are the ordinary though not exclusive ends served by that law...*"(emphasis added).

39. Dr. Theo Colburn's work for World Wildlife Fund US, recent reports of the International Joint Commission, Toxic Trade Update 6.4 (Greenpeace) citing Environmental Research Foundation, Rachel's Hazardous Waste News, #343, June 24, 1993.

40. This is probably true of biotechnology given the signing of the Biodiversity Convention, the rapid loss of biodiversity and the patenting of life-forms around the globe. In addition, the discovery and use of indigenous plant species for medicinal purposes is also

41. S.91(2).

42. *Citizens' Ins. Co. v. Parsons* (1881), 7 App. Cas. 96

43.Ibid.

44.*Constitution Act, 1867*, s.91(12).

45.See *R.v. Fowler*, [1980] 2 S.C.R. 213, 113 D.L.R. (3d) 513 and compare *Northwest Falling Contractors Ltd. v. The Queen*, (1980), 113 D.L.R. (3d) 1 (S.C.R.)).

46. The right to silence is considered to be a component of the procedural rights contained in s.7, and is also protected by s.11(c), 11(d), and s.13.

47.For example, see *R. v. Weill's Food Processing Ltd.* (1991), 6 C.E.L.R. (N.S.) 248 (Ont. Ct. J.), wherein the Ontario Court of Justice held that using mandatory spill reports as evidence would be contrary to an accused's right to silence.

48. Such sensitivities are reinforced by court decisions such as the *Hydro Quebec* case wherein a Que. Supreme Court struck down a PCB regulation under CEPA as being unconstitutional ("ultra vires"). Until, this vaguely-reasoned decision has been taken to the S.C.C., it cannot be considered to be a definitive statement on the constitutionality of the regulation. Moreover, should it be found to be unconstitutional by the S.C.C., it is likely possible to sever this regulation from the remainder of *CEPA*, leaving the balance of the Act and its regulations intact. In such a scenario, the appropriate response, we submit, is to identify possible inadequacies of the evidence put forward by the federal government to support its constitutional mandate and/or determine how better to define the scope of regulations under *CEPA* to avoid overstepping provincial jurisdiction.

49. Institute of Intergovernmental Relations. Approaches to National Standards in Federal Systems. (Kingston: Queen's University Press, September, 1991) at 1.

50. World Commission of Environment and Development. Our Common Future. (New York: Oxford University Press, 1987) at 314 ff.

51. The analysis in this paragraph is discussed generally in, Institute of Intergovernmental Relations, Approaches to National Standards, ibid.

52. Institute of Intergovernmental Relations, ibid, at 3.

53. Resource Futures International. Evaluation of the Canadian Environmental Protection Act: Final Report. (Ottawa: Ministry of Supply and Services, 1993) at 99.

54. Alastair R. Lucas, "Jurisdictional Disputes: Is 'Equivalency' a Workable Solution?" in Donna Tingley, Ed. Into the Future: Environmental Law and Policy for the 1990's. (Edmonton: Environmental Law Centre, 1990) at 25.

55. Lucas, ibid, at 25-26.

56. See Toby Vigod and Rick Lindgren "Overview of Federal Law, Regulation and Policy: A paper presented to the Canadian Institute two day course on Environmental Law and Regulation in Ontario", (Toronto: Canadian Environmental Law Association, 1994) at 25-26.

57. See *Canada Gazette, Part I (July 23, 1994), at p. 3459.*

58. Resource Futures International, Evaluation of CEPA, at 104.

59.Ibid., pp.102-103.

60.Ibid, at 103.

61.Ibid.

62.Ibid., at 103.

63.Ibid, at 104.

64.Ibid.

65. Ibid, at 105. One of these agreements, the Quebec/Canada agreement on pulp and paper effluent, is, according to Stephania Trombetti at Environment Canada, waiting only on the signature of the Premier of Quebec, which, at the time of writing, August 1994, may wait until the elections in Quebec are over. An Access to Information request has been entered by the author for this agreement.

66.Ibid, at 105.

67. Franklin Gertler, "Lost in (Intergovernmental) Space: Cooperative Federalism in Environmental Protection", in Steven A, Kennett ed., Law and Process in Environmental Management: Essays from the Sixth CIRL Conference on Natural Resources. (Calgary: Canadian Institute of Resources Law, 1993) at 261-262.

68. Ibid., at 260.

69. N. Bankes, "Co-operative Federalism: Third Parties and Intergovernmental Agreements in Canada and Australia" (1991) 29 Alta. L. Rev. 792 at 797.

70. Gertler, "Lost in Intergovernmental Space," at 274.

71. Ibid., at 281-282.

72. Environment Canada. Canadian Environmental Protection Act: Report for the period April 1992 o March 1993. (Ottawa: Minister of Supply and Services, 1993) at 3-4.

73. Resource Futures International, Evaluation of CEPA, at 100.

74.Ibid.

75.Ibid.

76. Ibid.

77. Kathryn Harrison, "Prospects for Intergovernmental Harmonization in Environmental Policy," forthcoming in Douglas Brown, Janet Hiebert, eds., Canada -- The State of the Federation 1994 (Kingston: Institute of Intergovernmental Relations, 1994) at 27.

78. Ibid, at 28.

79. Ibid.

80. Canadian Council of Ministers of the Environment. "Rationalizing the Management Regime for the Environment: Purpose, Objectives and Principles," undated, at 2-3.

81. The Harmonization Task Group members are: Dr. David Besner, Director, Policy and Intergovernmental Affairs, Department of the Environment, Fredericton, NB; Mr. Andre Harvey, Assistant Deputy Minister, Sustainable Development and Conservation, Department of Environment and Wildlife, Sainte-Foy, Quebec; Ms. Janet Bax, Director, Federal Provincial Relations Branch, Policy and Communications Directorate, Environment Canada, Hull, Quebec; Ms. Jisele Jacob, Acting Director General, Program Integration Directorate, Environment Canada-EPS, Hull, Quebec; Mr. Ken Richards, Coordinator, Intergovernmental Relations Office, Ministry of the Environment and Energy, Toronto, Ontario; Mr. Dick Stephens, Director, Legislation and Intergovernmental Affairs, Department of Environment, Winnipeg, Manitoba; Mr. Bob Ruggles, Director, Water Quality Branch, Environment and Resource Management, Regina, Saskatchewan; Mr. Ron Hicks, Assistant Deputy Minister, Research and Strategic Services, Alberta Environment Protection, Edmonton, Alberta; Mr. Jamie Alley, Director, Corporate Policy, Planning and Legislation, Ministry of Environment, Land and Parks, Victoria, British Columbia.

82. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," at 4.

83. The Australian "Intergovernmental Agreement on the Environment, May, 1992" was the original model for the Canadian intergovernmental agreement on Harmonization. However, according to Barbara Czech, Director of Communications, CCME, the final Canadian agreement may take a form completely unlike the Australian agreement.

84. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," at 5.

85. *A.G. Nova Scotia v. A.G. Canada* (Interdelegation Reference), [1951] S.C.R. 31.

86.Gertler, "Lost in (Intergovernmental) Space," at 255.

87. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," p.7.

88. Ibid.

89. Ibid, at 8.

90. Ibid, p.9.

91. Kathryn Harrison, "The Regulator's Dilemma: Regulation of Pulp Mill Effluent in a Federal State," presented at the Annual Meeting of the Canadian Political Science Association, Ottawa, June 1993.

92. Ibid, at 31-33.

93. Many writers beside Harrison have noted this tendency. See, among others, Toby Vigod and Richard D. Lindgren, "Overview of Federal Law, Regulation and Policy" (Toronto: Canadian Environmental Law Association, 1994); George Hoberg, "Environmental Policy: Alternative Styles", in Michael M. Atkinson, ed., Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993); Tom Conway, "Taking Stock of the Traditional Regulatory Approach" in G. Bruce Doern, ed., Getting It Green: Case Studies in Canadian Environmental Regulation (Toronto: C.D. Howe Institute, 1990); Ted Schrecker, "Of Invisible Beasts and the Public Interest: Environmental Cases and the Judicial System" in Robert Boardman, ed., Canadian Environmental Policy: Ecosystems, Politics and Process (Toronto: Oxford University Press, 1993).

94. See George Hoberg, "Environmental Policy: Alternative Styles" in Michael M. Atkinson (ed.) Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993) 307.

95. Canadian Council of Ministers of the Environment. "Rationalizing the Management Regime," p.3.

96. Ibid, p.9.

97. Ibid, p.1.

98. Harrison, "Prospects for Intergovernmental Harmonization in Environmental Policy," p.23.

99. For a discussion of the dynamics of policy innovations in federal systems see, for example, K.McRoberts, "Federal Structures and the Policy Process," in M.Atkinson, ed., Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993), pp.159-160.

100. Canadian Council of Ministers of the Environment, "Rationalizing the Management Regime," p.8.

101. George Hoberg, "Environmental Policy: Alternative Styles," at 315.

102. Northey suggests that "... the federal government could use its spending power to provide uniform administration and enforcement of comprehensive environmental regulation across Canada. Equally, it could use this power to link regional economic development to environmental performance. Secondly, the federal government could use its declaratory power to create a national scheme of toxic waste disposal sites, thus removing a major regulatory burden facing the provinces. Federal responsibility for this area could encourage provinces to assist the federal government in thoroughly controlling the remaining aspects of a comprehensive cradle-to-grave scheme." (p.180)

APPENDIX 2

CEPA AND ENVIRONMENTAL LAW ENFORCEMENT

Prepared by:

Karen Clark, B.A., M.A., LL.B.

and

Barbara Rutherford, B.A., LL.B.
Research Associates

Canadian Institute for Environmental Law and Policy
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CEPA AND ENVIRONMENTAL LAW ENFORCEMENT

I. INTRODUCTION

The discussion that follows reviews the implementation of, and enforcement practices under, CEPA since it became law in 1988. We argue that both implementation and enforcement practices fall far short of what could be realized under the Act. The important question arising from our analysis is: why has there been such a shortfall? One argument, reviewed below, that has arisen in the past is that enforcement practices fail when sanctions under an environmental protection statute are "too strict." It is beyond the scope of this discussion to deal with the question of whether or not this argument is correct in relation to any other environmental statute. We believe, however, that this argument cannot be properly applied to CEPA, as there has never been a demonstrated effort to rigorously implement or enforce the Act.

What there has been, since before CEPA was passed, is a marked reluctance on the part of the federal Department of the Environment to act as a regulatory and enforcement body -- the role CEPA requires it play. It is this reluctance, attributable in large part to the "advisory" role originally conceived as the chief purpose of the Department of the Environment, that has resulted in failures in CEPA's implementation and enforcement.

The discussion below first reviews the "enforcement debate", and discusses the importance of criminal sanctions in environmental law. We conclude that, contrary to the "all or nothing" stances that dominate the "enforcement debate", regulatory regimes enacted to protect the environment should occupy a full range of mechanisms, from voluntary compliance agreements to the fullest sanction permitted by law. Next, we discuss enforcement patterns under CEPA. We argue that the Act's weak enforcement record has negatively impacted on the federal government's perceived legitimacy to act in the field of environmental regulation. We review the evidence of the absence of the political will that meaningful implementation and enforcement of the Act requires: the Department of the Environment's constitutional reticence; its chronic lack of adequate resources; and its unclear mandate. We conclude that the shortfall in implementation and enforcement of CEPA since 1988 is the result of these weaknesses.

It may very well be, however, that there are inadequate resources allocated to the inspection and enforcement branches of Environment Canada. Although we recommend that some reallocation of Environment Canada's budget take place to reflect the importance of enforcement in CEPA achieving its goals, we also advocate an additional enforcement tool: citizen suits. A citizen suit provision would allow citizens to be the "eyes and ears" of the government -- assisting in the implementation of a well-known and widely articulated enforcement and compliance policy.

II. THE IMPORTANCE OF ENVIRONMENTAL LAW ENFORCEMENT

The solution is not less law, but better law.[1]

In its overview of the issues for CEPA review, Environment Canada asks how the Act can contribute to sustainable development, and suggests that "environmental management" needs to be rationalized and generally improved. This section of our discussion assumes that "environmental management" cannot be distinguished from environmental *regulation*.

1) The Enforcement "Debate"

From the inception of contemporary environmental regulation in the 70s, a debate has raged regarding which method of obtaining compliance is the most effective. It is generally agreed that, in Canada, there have been two common approaches:

> "...the two approaches may be referred to as "promotion" and "enforcement." The former...consists of non-coercive measures to encourage or promote improved environmental performance. An enforcement strategy...relies more heavily on the use of prosecution and formal sanctions."[2]

Each approach has its advocates, and each its opponents. Studies undertaken within the last decade have shown that where strict sanctions have been provided for under the legislation, there has been a marked shortfall in enforcement.[3] For some writers, this shortfall indicates that negotiated, promotional agreements are swifter, surer and more economically feasible than hard line prosecutions.[4] Others argue that prosecutions are swifter, surer and more economically feasible than long, drawn out negotiations.[5] Strict enforcement policies, some say, damage the relationship between the regulated parties and the enforcing ministry; the relationship becomes adversarial, and cooperation becomes impossible.[6] Still others argue that firm enforcement practices improve the relationship between the enforcers and the regulated party, indicating that once the regulated parties understand that the rules of the regime will be enforced, they become more cooperative.[7]

For all that these positional debates appear to cancel one another out, they do point to the helpful conclusion that there is no one best way to obtain compliance with environmental regulation. The fact that neither approach is entirely effective does not mean that either should be entirely abandoned. It is our understanding, however, that "voluntary" compliance will occur sooner and more efficiently if regulated industries understand that regulators will enforce compliance if need be.

As enduring as the promotion/enforcement debate has been, it is clear that the polarized positions within it are becoming anachronistic. As Canada and other jurisdictions approach a quarter century of environmental regulation, it is increasingly acknowledged by all sides that any regulatory regime must embrace a full spectrum of approaches, from the entirely voluntary to the strictest expression and fullest sanction available under the law. The challenge before us is to bring CEPA up to date with current thinking.

2) Importance of Criminal Sanctions in CEPA

It must be emphasized that criminal sanctions have a key role to play in environmental regulation. The first attempts at environmental regulation in Canada proposed strict prohibitions, and swift enforcement. These laws were a response to increasing public awareness of the dangers posed by pollution to human health and the environment. These laws also sought to express the public's abhorrence of wanton acts of environmental destruction, and to act as a deterrent to anyone who might commit such a crime. The strictness of and the stigma attached to these sanctions were understood to represent society's opinion of criminal polluters. So far as can be determined, this opinion has not changed.[8]

However, even before CEPA was passed into law, discussions arose suggesting that, not only did strict sanctions militate against effective enforcement of environmental laws, they were markedly disproportionate to the lion's share of environmental offenses.[9] The conclusion proposed by Webb and others was that criminal sanctions should be reserved for undefined "egregious" offenses against the environment, if, indeed, there should be criminal sanctions at all. The position that appears to be emerging from this conclusion is that there is no place in environmental regulation for criminal sanctions, which casts some doubt on the fate of the offence provisions under CEPA.[10]

However, Webb's discussion deals exclusively with the question of whether or not there should be a new *Criminal Code* offence dealing with crimes against the environment. In this specific context, Webb concludes that current provisions in the Code deal adequately with environmental offenses that endanger or take human life. Elsewhere in his discussion, Webb indicates that he does not believe that the general run of environmental offenses (regulatory violations such as improper storage, or accidental spills) fit the legal definition of a criminal act, and attaching "criminal stigma" to these acts merely obfuscates the issues and complicates enforcement.

Webb is correct that regulatory infractions often are not comprised of what the law requires to be the elements of a criminal offence. He is also correct that at least some of the current regulatory regime can adequately deal with these infractions without extending further into criminal law. However, it would be a grave error to extrapolate from Webb's conclusions that there can be no such thing as an environmental crime, nor any

need for criminal sanctions.

The "mens rea" (guilty mind) requirement of criminal law and the standard of proof "beyond a reasonable doubt" do not obviate the need for criminal sanctions against crimes against the environment. These requirements are part of criminal law in order to protect the civil rights of the accused. There is no reason to believe that convicting environmental criminals will be any easier than convicting other criminals. But there is nothing persuasive in the argument that there cannot be a "crime against the environment" simply because it will be difficult to gain a conviction. Finally, Webb's conclusions appear to be influenced by his understanding that actual criminal acts against the environment are uncommon. Murder is also rare; that does not prevent society from extending its fullest sanction against it. Moreover, were murders to stop tomorrow, it is unlikely that the crime of murder itself would be stricken from the Code. The frequency or infrequency of crimes against the environment is irrelevant to whether or not there should be laws against them.

Webb's and others' thinking on the question of whether or not there must be a Criminal Code sanction against crimes against the environment appears to be influenced by the polarized debates described above. There is an "all or nothing" air to their positions. For example, dissenting Law Reform Commission of Canada Commissioners state that criminal sanctions on top of regulatory sanctions will send "conflicting signals to the regulated parties" and "divert attention away from the real problems of regulatory enforcement."[11] Whatever the Commissioners believe to be the "real" problems of regulatory enforcement, they also appear to believe that sanctions must either be all regulatory, or all criminal, with nothing in between. As noted above, and as will be discussed below in detail, the most effective new environmental regulatory regime will occupy all the points between.

The Law Reform Commission wrote that the majority of the Commissioners are convinced of the need to use criminal law to underline the value of respect for the environment itself and stigmatize behaviour causing disastrous damage with long-term loss of natural resources.[12] We are also convinced of that need.

Many things have changed since the early days of contemporary environmental protection laws. Two decades of enforcement have educated us about the strengths and weaknesses of regulatory and non-regulatory methods to control threats to the environment. One thing that has not changed is society's abhorrence of those who would deliberately or recklessly threaten the health of the environment. Neither has the need changed to deter such behaviour. The expression of public abhorrence and the deterrence of criminal polluters are functions that have been performed by the offence provisions under CEPA, and are functions they should continue to perform.

III. THE CEPA ENFORCEMENT RECORD

1) The CEPA Review - What is at Stake?

CEPA has been at the centre of its own "enforcement debate." The Act's passage was accompanied by statements that Environment Canada intended to "get tough" with polluters. However, in the result, "toughness" does not appear to have played a significant role in the Department of the Environment's strategy to control polluters. Rather, the Department follows a "promotional" strategy, preferring to cooperate with regulated industries in order to attempt to secure compliance. Only rarely does the Department prosecute under the Act. The prosecutions that do arise pertain to infractions of only a few of the regulations under CEPA. These prosecutions generally do not result in high fines. The key question in the context of the CEPA review is whether this contradictory situation of a strong Act and weak enforcement practices can accomplish the goals of sustainable development and pollution prevention. In our view, it cannot.

Improving the effectiveness of the Act requires more than merely changing the Act, and more than restructuring the enforcement branch of the Department of the Environment (although both of these changes are required). As discussed in detail below, two fundamental policy changes are also required. First, the federal government must accept and act on its clear authority and responsibility to make and enforce environmental regulations. Secondly, the Department of the Environment must move beyond the "advisory" role that was its original mandate, and accept the mandate which CEPA provides to it: that of a strong regulatory agency.

The federal government must now, as it reviews CEPA, confront the legacy of its reluctance to assert its legitimate jurisdiction to implement and enforce the Act. As reviewed elsewhere in this submission, plans have been initiated to harmonize federal/provincial environmental regulation.[13] There are also increasing international pressures to not only standardize regulations, but to coordinate them with the imperatives of sustainable development and pollution prevention as well. Environment Canada has shown some tentative interest in including these considerations in the CEPA Review.[14] The challenge that now confronts the federal government is how it will demonstrate that it has preserved for itself the regulatory legitimacy that these initiatives will require.

2) Environment Canada's CEPA Enforcement Record

The record of enforcement practices under CEPA suggests that when Environment Canada feels it can act, it does.[15] However, this resolve to action has resulted in an average of less than five prosecutions per region per year under CEPA and the *Fisheries Act*, and a cumulative national average of approximately ten prosecutions per year under CEPA. The highest incidence of CEPA-related prosecutions come under the Ozone-Depleting Substances Regulations (twenty-five, or forty-two per cent of CEPA prosecutions), the Ocean Dumping provisions under s. 67 (fourteen, or approximately twenty-four per cent), the PCB Storage Regulations and Interim Order (eleven, or

approximately nineteen per cent) and the Gasoline Regulations (eight, or seven per cent). It should be noted that prosecutions in Ontario brought under the Gasoline Regulations have been withdrawn or stayed as the government plans to change the regulations.[16]

While prosecutions are rare, the incidence of guilty pleas and convictions is comparatively high; all regions score conviction rates of eighty per cent or higher, four out of five score ninety per cent or higher. High fines are only infrequently levied; over sixty per cent (forty-eight out of a total of seventy-eight fines levied under CEPA and the *Fisheries Act*) have been less than ten thousand dollars. Of the remaining thirty fines, only two have been for one hundred thousand dollars or more. The highest fine ever levied by the courts was one million dollars for thirty-six counts of violations under s. 36(3) of the *Fisheries Act*. The next-most-frequently prosecuted offenses, under the Ozone Depleting Substances regulations, have resulted in fines ranging between three and one hundred thousand dollars; fines for PCB regulations offenses occupy a range between three and thirty thousand dollars.

The fact that fines are rarely very high does not necessarily indicate anything other than judicial reluctance to levy harsh penalties. It does cast significant doubt, however, on the arguments, cited above, that suggest severe penalties are a disincentive to enforcement. If the worst Environment Canada officials thought an offender was going to get in court was a fine between ten and thirty thousand dollars, one would expect, according to the logic of the arguments, that they would undertake more than ten prosecutions a year.

There are a total of twenty-four substance-controlling regulations under CEPA, half of which existed originally under the Acts CEPA sought to consolidate.[17] Yet, only three (the ozone-depleting substances regulations, the ocean dumping regulations, the PCB regulations) of them are enforced with any frequency. The conclusion that we draw from this review of the statistical record is that Environment Canada is most likely to act when:

1) there is overwhelmingly clear precedent in the law (the *Fisheries Act* has been law since just after Confederation; federal jurisdiction over ocean dumping has been affirmed by the Supreme Court of Canada);

2) there is virtually no overlap with provincial jurisdiction (the CFC regulations arise from Canada's international obligations under the Montreal Protocol);

3) there is high public awareness of and concern over certain substances that makes action politically popular (the PCB regulations);or

4) some combination of the above factors.[18]

What these patterns of enforcement indicate is that the federal government has whittled down its jurisdiction -- and its perceived legitimate scope of action -- to a small,

safe, sphere, from which the federal government may find it difficult to extricate itself when the time comes to do so.

l) Eroding the Legitimacy of a Federal Role in Environmental Protection

By "legitimacy," this discussion means the perception that a government, by occupying a field of activity (that it has legal grounds to occupy) and by exerting its influence in that field, presents to the public, industry and other governments the message that it is in the field, it is supposed to be there, that it is effective, and that the effects of its presence and activity are for the general benefit. When a government operates in a circumspect manner in a field it is supposed to act in -- as the federal government has done in the field of environmental regulation and enforcement – it undermines its perceived legitimacy to occupy the field. That is to say, even though the federal government has uncontradicted jurisdiction to regulate in some fields of environmental law, its muted behaviour has resulted not only in the perception of its shirking its responsibility, but also in the sacrifice of the legitimacy of its actions in the field.

The greatest blow against legitimacy, of course, occurs when a government's reluctance to act creates an incapacity to act, such as that described by Conway:

> "The ... result has been a malleable regulatory process based heavily on exhorting compliance agreements. When spending could be called for on employment and regional equity grounds, neither the capacity nor the desire for regulators to act was there. In short, regulators often found themselves without the carrot or the stick."[19]

Legitimacy is also eroded when whatever action is taken has little positive effect. There are, for example, only a few concrete indications that promotional practices have effected marked gains in environmental protection. There is, on the other hand, considerable evidence that promotional strategies are particularly ineffective with large, heavily-polluting companies:

> "In 1987 the Canadian Environmental Advisory Council (CEAC) ...identified a pattern of almost two decades of systematic non-enforcement of the antipollution provisions of the *Fisheries Act* in Quebec, despite the existence of a number of land-based sources of continuous discharge of highly toxic substances which seem to enjoy complete immunity from prosecution....An internal memorandum by a Department of Fisheries and Oceans official leaked in December, 1989, was bitterly critical of the federal 'negotiate and compromise at all costs philosophy' of non-enforcement of *Fisheries Act* violations against a number of large firms in British Columbia."[20]

Others have noted that the "bipartite deal-making" (the basic framework of promotional strategies) between federal regulators and those they regulate generally serves the interests of the regulated, not the regulators.

> "While state institutions are relatively weak, business has formidable power resources at its disposal. In addition to large financial resources and control over vital information, business has clear organizational advantages...Since environmental regulation tends to be organized by sector...Canadian business has been well organized to influence the process. Moreover, where it really counts, where the regulator meets the polluter in the enforcement function -- at the level of the firm -- Canadian business is quite strong. On top of these organizational advantages, business control over investment is an extremely powerful resource, giving business the ability to threaten divestment if regulation becomes too stringent."[21]

Promoting as opposed to enforcing the requirements of CEPA has had the effect, therefore, of not only starkly limiting the effectiveness of regulatory activity, but has put the federal government in a position where it is subordinate to the industries it is supposed to regulate.

If the federal government intends to take on the challenges of pollution prevention and sustainable development under CEPA and possibly other legislation, it cannot continue to stay within its small, safe sphere. Rather, it must return to the "first principles" of its constitutional authority to regulate the environment and to its own claims made when CEPA became law. As described in detail below, CEPA rode in on the fanfare of getting tough with polluters. There is a strong inclination now, on the part of Environment Canada, to readily attribute its weak enforcement history, following the analysis of Webb and others, to the failings of this approach. However, as there has been no demonstrated will to rigorously enforce CEPA, the rationalization that CEPA enforcement failed because it was too rigorous seems wrong. It is our understanding that other factors have had a strong role to play in CEPA's weak enforcement record.

3) CEPA'S Defeating Political Paradox

Enforcement practices under CEPA have been confounded by the political paradox that has coloured government action under and around the Act since the day it was passed into law. CEPA was "sold" to the Canadian public, in the words of Minister of the Environment Tom McMillan, as "the country's first environmental bill of rights", "the most comprehensive piece of legislation in the western world",[22] and as an Act under which punishment would be swift, significant and sure:

> "Sanctions will include million-dollar-a-day fines. ... The new law will also place

> responsibility squarely where it belongs--on the shoulders of the chief executive officers and presidents of companies who permit violations to occur. They will be subject to jail sentences of one to five years. And the government intends to enforce the law with vigour."[23]

Whatever the government's intentions were with the passage of CEPA into law, they were not as stated. One might be inclined to hazard the suggestion that the word "vigour" more accurately describes the way in which the federal government has avoided its responsibilities under the Act.

When CEPA was enacted, the government of the day seems to have concluded that CEPA provided it with an opportunity for cosmetic environmental regulation: the Act gave the appearance of implementing a strong regulatory regime, without requiring the government to actually do so.[24] One result of this evident strategy has been a high degree of public cognitive dissonance about the federal government's role in environmental protection, and an ongoing erosion of the general perception of the legitimacy of federal activity in the realm of environmental regulation.[25] If the political agenda underlying the passage of CEPA was to dissociate the federal government from perceptions that it had a strong role to play in environmental regulation, then one must accept the conclusion that CEPA has been something of a success. However, this is not the "success" one would reasonably expect from the fanfare CEPA rode in on, or, indeed, from the words of the Act itself. Nor does this "success" meet the requirements of sustainable development and pollution prevention.

Any review of CEPA must acknowledge that many of the failings of Act's implementation and enforcement have to do with this political paradox, and not with the Act itself.

4) Lack of Constitutional Capacity or Lack of Political Will?

The bold statements by the Minister of the Environment notwithstanding, little else of the federal government's actions relating to the Enforcement of CEPA show much boldness. On the contrary, as discussed in detail below, the federal Department of the Environment operates with the triple handicap of constitutional reticence, inadequate resources and an uncertain mandate. These factors lead to the circumspect, inefficient and ineffective patterns described above and must be remedied in order for CEPA to meet the requirements of sustainable development and pollution prevention.

I) Constitutional Reticence

The federal government has clear and legitimate jurisdiction over certain matters requiring environmental regulation. However, the federal Department of the Environment

has been largely pre-occupied -- before and after CEPA -- with not interfering with what it considers to be matters under provincial jurisdiction, and with not "[aggravating] federal-provincial relations."[26] It is our view, shared by many other commentators, that the federal government's concern with its jurisdictional authority is more perceived than real.[27] The political purpose served by these concerns is that they have provided the federal government with an excuse not to effectively implement and enforce CEPA. The history, mandate and internal policies of the Department of the Environment all reflect the federal aversion to exerting its constitutional authority in the realm of environmental regulation.

ii) Inadequate Resources

Since before CEPA, the federal Department of the Environment has been staffed by individuals inadequately trained to achieve the department's ostensible mandate.[28] In the mid-70s, the problems with the staff and its capacities were described as:

> "...its inability to establish and carry out rigorous compliance procedures; an overtaxed and declining scientific and investigative capacity; uncertainty and insecurity in federal-provincial and interdepartmental relations; and a lack of economic and legal literacy.[29]

While CEPA was to have directly addressed some of these problems, recent stock-taking by Resource Futures International (RFI) of Department of the Environment behaviour under CEPA shows little improvement. The department is understaffed, and the staff is inadequately trained. The Department of the Environment investigation and enforcement staff for the entire country number eight-six people,[30] approximately the same number of people employed by the Ontario Ministry of Environment and Energy to undertake investigation and enforcement. Hiring policies populate the department with people with technical expertise, but with little training or direction by their superiors to enforce the Act.

The information resources for the department, in this day of international computer communications, are woefully inadequate, and significantly contribute to the inefficacy, inefficiency and inconsistency of enforcement policies.

> "...There is no standard format for inspection of investigation reports. Enforcement staff in each region are organized differently, use different administrative procedures and in some cases rely on different enforcement priorities...Compliance histories and inspection and investigation information are decentralized and incomplete, both within and across the regions...Each region has a different tracking system. Ontario and Quebec have no tracking system...Since information on enforcement from other regions is not available, except by ad hoc phone contact, there is a lack of

consistency in enforcement across the country...Inspection results are not always reported back to the company being inspected. Inspectors are not always informed of investigation results."[31]

RFI reports that *one person* has been hired to create a centralized data management system for the whole country in order to solve these problems. This further suggests that a realistic commitment of resources to effective implementation and enforcement has yet to be achieved.[32]

iii) Uncertain Departmental Mandate

As already noted, when CEPA was enacted the federal government pledged, on the one hand (the hand proffered to the public) to "get tough" with polluters. On the other hand (the hand that appears to be actually controlling the Act's implementation), the government supports a cooperative, promotional approach. The net result of this legislative schizophrenia is a federal department that does not know what its job is. It cannot be surprising, then, that it has difficulty getting its job done.

The history of the creation and the first eighteen years of the federal Department of the Environment (from 1970 to 1988, when CEPA was passed into law) reveals that the department was not originally conceived as one with powers to regulate and enforce. Rather, its role was to provide information to other federal departments.

> "In this sense, the Department of the Environment shared many features with the Ministries of State for Science and Technology and Urban Affairs, which were created at the same time. Like the Ministries of State, Environment Canada, with its extensive environmental research programmes, but limited regulatory and program delivery role, appears to have been intended to operate largely on the principle that 'knowledge is power.'"[33]

The understanding was that other departments would look to the Department of the Environment for its "expertise" in environmental matters. However, the fashion in which the department was cobbled together from disparate and distinct departments of other ministries,[34] the fact that the duties of the department were often shared with other departments,[35] and the comparatively low status in Cabinet of Ministers of the Environment,[36] made the accomplishment of even this limited role quite difficult. Brief periods of concern over high-profile environmental issues such as acid precipitation occasionally raised the profile of the Department of the Environment. At least ostensibly, the department did have a role to play in assessing the environmental impacts of federal undertakings.[37] However, then, as now, there was strong opposition to any initiative that appeared to interfere with the jurisdiction of the provinces.[38] The department responded to this opposition by sticking to an advocacy strategy, and working through

partnerships with regulated industries and provincial environmental officials.[39] The passage of CEPA did not appreciably change this pattern of behaviour. The "information support" role of the department as originally conceived has not fundamentally changed.

However, the passage of CEPA has created a pressure point in the Department of the Environment, one that has been described as the department's "promotion/enforcement" dichotomy. The tensions created by the dichotomy arise directly from the inconsistencies between "tough" wording of CEPA and the conciliatory strategies of the department. Investigations staff, as already mentioned, are hired for their technical proficiency. Their first purpose, apparently, is to promote the goals of the Act rather than to enforce it. RFI notes that good technicians do not necessarily make good enforcers.

> "...many of Environment Canada's inspectors are reluctant to enforce because they are technically trained and therefore do not have an "enforcement mentality." They deal with other technically trained people in the regulated industries and share a common professional problem-solving ethos, which is not congruent with the enforcement approach. Inspectors are also reluctant to enforce because they inevitably develop relationships with the regulated industries that they are reluctant to disrupt by "getting tough." This problem is particularly severe when the same people are inspecting as are investigating and laying charges."[40]

The problem becomes even more severe when investigators (who may actually have more of an "enforcement mentality" than RFI grants) have to rely on the decisions of senior management regarding whether or not a prosecution will go forward.[41] Once passed senior management, a case must also pass the scrutiny of the Prosecution Group of the Justice Department which makes the final decision of whether or not to prosecute. According to one Department of the Environment official, however, the Justice Department is not the bottleneck in the prosecution process.[42] The indications are, rather, that senior management stonewall lower-level initiatives to prosecute. RFI notes that the direction senior management at the Department of the Environment is tending toward is more promotion, and less enforcement.

> "Within Environment Canada, recent policy statements have created the perception among many of the enforcement staff that official policy has moved away from the relatively strict approach outlined in the Enforcement and Compliance Policy."[43]

The role that senior management has played in keeping a close rein on CEPA enforcement policies must be acknowledged, and must be addressed.

Change as a result of the CEPA review must happen not only in how the department is structured, but in how the role of the department is conceptualized. The

Ontario Ministry of Environment and Energy provides a model for how the federal Department could be restructured. Ontario's Ministry of Environment and Energy has separate information and enforcement branches. It also has an in-house legal services department that works with the enforcement branch. This approach appears have been extremely successful in bringing about a vigourous enforcement policy in that province.[44]

However, enlarging and creating new structures within the federal Department of the Environment alone will not be sufficient to address the failings of its enforcement practices. The department must also accept the clear regulatory mandate provided to it by CEPA.

5) Conclusion - A Failure of Political Will

That CEPA has fallen so short of its stated goals is simply unacceptable. The Act and the regulations promulgated under it propose to control a very short list of toxic substances, and control activities very clearly within the jurisdiction of the federal government. Yet the Department of the Environment has always been under-funded, inadequately staffed and indifferently managed by the senior bureaucracy. Enforcement of CEPA has been infrequent and disproportionately focused on only three regulations.[45]

The situation does not suggest, as has been proposed by the "Reviewing CEPA: An Overview of the Issues" document issued by Environment Canada, that a serious problem with environmental regulation in Canada has been "overlap and duplication of effort."[46] On the contrary, the serious problem with CEPA has been the federal government's own reluctance to assert its clear constitutional authority to regulate the environment and enforce those regulations. This absence of political will and leadership has significantly contributed to all the failings noted above. The inefficacy, inefficiency, and lack of certainty that surround environmental regulation in Canada are not because of the law, but because of the failings of those people whose elected responsibility it is to see that the law is effectively implemented and enforced.

The provision more and better-trained enforcement staff, the reallocation of funds to improve information management infrastructure, the clear separation of promotional and enforcement functions branches, in themselves will not adequately address the failings of Environment Canada's enforcement practices. The underlying problems regarding the acceptance of the regulatory mandate provided by Environment Canada by CEPA, by the department's senior staff and political leadership, must also be addressed.

IV. STRENGTHENING CEPA'S ENFORCEMENT THROUGH CITIZEN

INVOLVEMENT

Qui tam pro domino rege quam pro seipso[47]

1) Introduction

Citizens have participated in enforcement since the earliest beginnings of the English common law system.[48] This history is important because it shows that citizen participation in enforcement, also known as "private prosecution", is not a foreign concept to the roots of our legal system.

Enforcement of any law is an essential prerequisite to achieving the law's objectives. One need only glance at the former environmental regimes of some of the countries in Central and Eastern Europe to realize that it is not enough to have forward-looking progressive laws enacted.[49] The regulated community must know that transgressions will be discovered and prosecuted with diligence.

We have examined the enforcement experience under CEPA and found it to be lacking in vigour. Although we make several specific recommendations regarding remedies for these inadequacies, in this section we advocate for the addition of a citizen suit provision to CEPA to help ensure that CEPA's goals are met.

Understanding the evolution of citizen enforcement lends context to the debate about enhancing public participation in environmental law.[50] Initially, in thirteenth and fourteenth century England, citizen enforcement supported the government in its protection of the public interest. The public health acts of the day, analogous to present day environmental legislation, included specific reference to citizen enforcement.[51] So-called "common informers" would initiate prosecutions and were entitled to receive a share of the penalty imposed upon conviction. Such financial rewards unfortunately created the incentive for unscrupulous citizens to advance vexatious proceedings. Public outcry about this kind of harassment resulted in these types of informer actions being abolished temporarily. However, given the need for citizen enforcement to implement English penal laws, these informer actions were subsequently reintroduced with safeguards against such abuse.[52]

As the tasks associated with protecting health and welfare grew in the context of the industrial revolution, a centralized bureaucracy was assembled to administer the new and/or expanded factory, public health, and food and drug legislation in the nineteenth century. This bureaucracy soon realized the need for a "...centralized and professional inspectorate charged with the responsibility of administering and enforcing..."[53] this social welfare legislation. This increase in volume and sophistication of social legislation made it very difficult for the average citizen to conduct private prosecutions.[54]

With the advent of the regulatory offence[55] and the defence of "due diligence"[56],

the private prosecutor needed to address governmental action or inaction as well as the conduct of the accused. This is because the government will often have a duty to regulate corporate environmental behaviour and may have in fact issued a permit or a control order concerning the behaviour which has given rise to the private prosecution. Compliance with any governmental permissions regarding the polluting activity will be entered as evidence of "due diligence."

Thus the citizen suit has evolved from a necessary and expected aid to government in implementing laws to a role that includes this "supplementary" function but also includes policing the government itself in its regulatory sphere.

The Attorney General has the primary responsibility for prosecutions. However, in our legal system, the Attorney-general has a potential conflict of interest as both the representative of the Crown responsible for public prosecution and as a member of Cabinet.[57] This conflict of interest is compounded by our legal tradition of delegating prosecutorial discretion to the Crown.[58] Citizens are left out of the decision-making when the Attorney-General decides whether to prosecute. This is particularly true with respect to the generally "invisible" decision not to prosecute.

Under Canadian common law, consistent with our English common law roots, there has always been the option of pursuing a private prosecution, as a supplement to the powers of the Attorney General to enforce a public crime or offence. Under the common law rules, a citizen has the right to lay a charge to bring an alleged wrong-doer to account before a court of law. Citizens who initiate in a private prosecution may act in the place of the Attorney General in such circumstances. However, the Attorney General is always entitled to exercise her discretion to take over the prosecution, and even abandon it, leaving the citizen with no specific role to play or recourse.[59]

A "citizen suit," on the other hand, is a *civil* action in which a private party has a statutory cause of action to seek relief in the civil courts to enforce the provisions of a statute. As such, a citizen suit has some advantages over a private prosecution. In a civil suit, the emphasis is on compensation rather than deterrence. In some instances this may be a more appropriate approach. Furthermore, the consent of the Attorney General generally is not required to pursue a citizen suit. Perhaps even more importantly, the burden of proof in a citizen suit is the civil one of "on a balance of probabilities," which a lesser onus than the criminal burden of beyond a reasonable doubt.[60]

2) The U.S. Experience with "Citizen Suits"

In the United States, citizen suits have been a legislated part of environmental regulation since the *Clean Air Act* was amended in 1970.[61] This enactment of a citizen suit provision has been used as a model in almost every major environmental statute

enacted in the U.S. during the last two decades.[62] These provisions permit citizens to take civil actions to seek injunctions against activities, either by private actors or government agencies, which violate the statutes in question.[63]

Civil penalties, payable to the government, are sometimes also provided for in U.S. citizen suit provisions.[64] These are designed to punish the violator, to eliminate any profit earned by the violator from the polluting activities, and to compensate for environmental caused by the polluting activity.[65] These penalties are generally reserved for the government to claim.

In addition, while in the U.S. citizens are normally entitled to intervene in government prosecutions where they can show an interest in the property or transaction at issue, most U.S. environmental statutes allowing citizen suits also grant citizens the right to intervene in government enforcement proceedings.[66] Where a case is settled, even before court proceedings are initiated[67], a citizen that has intervened becomes a party to the agreement and can participate in the settlement negotiations.

Citizen suits[68] have been recognized in the U.S. as a vital component of that country's environmental regulatory regime. Indeed, citizens are uniquely placed to act as the governments "eyes and ears" when it comes to monitoring the environment in which they live.

> "Citizens are on the of the nation's greatest resources for enforcing environmental laws and regulations. They know the country's land and natural attributes more intimately than a government ever will. Their number makes them more pervasive than the largest government agency. And because citizens work, play, and travel in the environment, each has a personal stake in its beauty, health, and permanence. Citizens are omnipresent, motivated, and uniquely interested in environmental quality."[69]

Public involvement in enforcement is also an important component of a democratic political system that encourages public participation in the creation of environmental statutes and regulations.[70]

When citizens suits were first enacted in the United States, there was considerable opposition to the concept. Warnings of a proliferation of lawsuits that would flood already overburdened courts were put forward. Others raised concerns about the ability of governments to shape their own prosecution policies, without interference from an overzealous citizenry. This opposition shaped the first citizen suit provision in the U.S. The result was provisions that allowed citizens to sue, but only after notifying appropriate regulatory agencies and giving them the chance to sue first. In addition, citizens were only allowed to sue to redress statutory violations, but not for damages.

In practice, citizen suits have tended to occur only in cases of serious and

egregious violations of environmental laws,[71] and it is generally held that citizen enforcement of environmental laws has supplemented governmental efforts which have been subject to resource constraints. Indeed, a number of U.S., government agencies have expressed their appreciation for citizen suit enforcement efforts.[72] In addition, allowing citizen suits as formal parts of environmental legislation has acted as an incentive to governments to actively enforce environmental laws, even when they may be reluctant to do so to political reasons.[73]

3) Citizen Suits and The Ontario *Environmental Bill of Rights*[74]

The new Ontario *Environmental Bill of Rights*, following the model of U.S. environmental citizen suit provisions, creates a new right for Ontario citizens to bring a law suit against an alleged polluter or other person suspected of breaking the law and causing harm to a significant public resource[75], that removes some of the obstacles to citizen participation in enforcement. Although, notice must be given to both the Attorney General and the Environmental Commissioner, under the Act[76], the Attorney General does not have the right to take over the proceeding, thereby exclude the citizen enforcer.

In order to ensure that the government has had an opportunity to investigate and decide whether to prosecute themselves, the citizen wanting to sue must first have submitted a Request for Investigation to the Environmental Commissioner and either not received a response within a reasonable time period or received an unreasonable response. Once the citizen initiates her suit, the Attorney General is entitled to present evidence and make submissions to the court in the action, as well as to appeal the judgment and call evidence and make submissions at the appellate level.[77] Although there are many remedies available in a successful citizen suit, including an injunction and an order to develop a plan for clean-up and restoration, the citizen cannot claim monetary damages personally. Costs are awarded pursuant to the court's discretionary power[78]; however, the court may take into consideration "...any special circumstance, including whether the action is a test case or raises a novel point of law."[79]

4) Requirements for Effective Citizen Enforcement

Successful citizen participation in enforcement requires support from other elements of the environmental protection system. Citizen suits must be permitted through an explicit statutory provision. The Ontario *Environmental Bill of Rights* is one of the few Canadian environmental statutes with such a provision.[80] A second requirement is that there be clear statutory standards of conduct against which the behaviour of potential violators can be measured. Specific emission levels, and deadlines for compliance, for example present the citizen, as well as the government enforcer, with more opportunities to enforce the law.

A third prerequisite to effective citizen enforcement is a public education program to ensure that citizens know about the various options for participation. Indeed, an enlightened government could use citizen volunteers to implement a comprehensive enforcement strategy.[81]

The provision of financial incentives to encourage such participation is essential. In the U.S. only one quarter of citizen suits filed between 1984 and 1988 were brought by individual or local coalitions, while the rest were brought by national or regional environmental organizations.[82] This statistic is likely largely influenced by the prohibitive costs of environmental litigation. Subsidizing citizen environmental enforcement directly is a potentially effective form of encouragement.[83] Indirect subsidy through provision of technical assistance, such as government experts and testing facilities, is also an appropriate role for government in the context of encouraging citizen participation in enforcement. The provision of assistance of this kind could be seen as part of the federal government's duty flowing from its statutory commitment to "encourage the participation of the people of Canada in the making of decisions that affect the environment" contained in CEPA.[84]

Generous cost rules are also necessary to encourage citizen suits to be brought in the public interest, allowing the court to exercise its discretion to not award costs against a unsuccessful citizen plaintiff where the suit was a test case or raised a novel point of law.

Finally, a crucial element in the success of citizen suits in the U.S. has been access to information on pollution levels supplied by polluters themselves, as part of regulatory self-monitoring and reporting regime.[85] Examples include the discharge monitoring reports required under the U.S. *Clean Water Act* and information available through the *Freedom of Information Act*. An enlightened government agency might also assist citizens in information-gathering by affirmatively disseminating environmental data collected in the course of its regulatory duties. An important component of the information requirements is reporting of non-compliance so that citizens can ascertain when the government has chosen to not enforce the statute in question.

5) A Citizen Suit Provision for CEPA

CEPA should be amended to permit citizen suits. This statutory recognition is necessary to overcome problems associated with private prosecution[86], such as the potential exclusion of the citizen from participation if the Attorney-General exercises his or her discretion to prosecute and/or enter a settlement with the alleged wrong-doer.

CEPA presently permits citizens to apply to the court for damages, or an injunction, where they have suffered personal loss, or will suffer personal loss, as a result of a violation of CEPA. However, the individual citizen must prove this loss or damage.[87]

CEPA also permits the minister to seek an injunction against activities which are, or may lead to, a violation of CEPA, or to obtain a court order requiring that the person named in the order take action to prevent a violation of CEPA.[88]

These existing provisions should be expanded to provide a clearly articulated citizen's right to bring an civil enforcement action, subject to proof of an offence, or imminent offence, on a balance of probabilities[89] in the event of a violation or imminent violation of CEPA. Remedies available under such actions should include the granting of injunctions ordering the person named to refrain from any action that may constitute or be directed towards the commission of an offense under CEPA, or to do anything necessary to prevent the commission of an offence under CEPA.[90] In the event that CEPA has been contravened, the person named in an application might be required to develop and implement a restoration plan to repair any damage caused to the environment in the course of the violation of CEPA.[91] Consideration should be given to allowing citizens to share in penalties levied against the wrong-doer upon conviction as well.[92]

The citizen suit provision should require notice to the Attorney General prior to initiation of the suit. However, where the Crown decides to pursue the case, the citizen, or citizens' group, should be entitled to remain a party to the prosecution. Where the Attorney-General settles the case without formal legal proceedings, the citizen should be entitled to participate in the settlement negotiations and permitted to become a party to any agreement signed.

The court's discretion regarding cost awards in citizen suit actions should be specifically stipulated to include considerations of whether the case is a test case or raises a novel point of law. Interim cost award should be made explicitly available under the citizen suit provision. In addition, a fund for providing enforcement costs to citizen enforcers should be created.[93]

The information dissemination provisions of CEPA should be reviewed to ensure that they encourage citizen participation in enforcement. The possibility of including voluntary citizen enforcers in their enforcement strategies should be considered. At a minimum, citizens should have access to monitoring information, and information regarding non-compliance, and decisions by the Attorney General not to prosecute.

Finally, in the Canadian federal context, the importance of clear standards under any delegation agreement cannot be overstated. Where equivalency agreements are permitted under CEPA, it should be made clear that the test for equivalency includes the provision of citizen suits under the "equivalent" provincial law.[94]

V. CONCLUSIONS AND RECOMMENDATIONS

There is no question but that Environment Canada's enforcement practices regarding CEPA require reform. Nor is there any question but that reform must not only address the past failings of government action under CEPA, but must also address the imperatives of sustainable development and pollution prevention.

RECOMMENDATIONS

1) Environment Canada's Departmental Mandate

The Department of the Environment must accept the regulatory mandate provided to it by CEPA. The Department can no longer limit itself to an "advisory" and "promotional" role. CEPA provides the department with clear direction to provide for the life-cycle regulation of toxic substances in Canada and a number of additional regulatory functions. The department must accept and operationalize these regulatory functions as part of its institutional mindset and core administrative policies. In the context of CEPA, Environment Canada's mandate must now be recognized as being two-fold:

1) to provide information clearly, and in a timely fashion to regulated industries; and

2) to enforce compliance with the requirements of the legislation when it is necessary to do so.

This regulatory mandate should be affirmed by the Standing Committee on Environment and Sustainable Development and by the government as a whole.

2) Departmental Restructuring

In order to operationalize this regulatory mandate Environment Canada's enforcement functions should be restructured. In particular:

* *following the model of the Ontario Ministry of Environment and Energy, information and promotion, and enforcement functions should be clearly separated;*

* *the need for Environment Canada to obtain permission from the Department of Justice to undertake prosecutions should be eliminated; rather prosecutions should be handled by Environment Canada's own legal services branch, as is the case with the Ontario Ministry of Environment and Energy; and*

* *investigative and legal services staff should be given greater authority to decide when to prosecute.*

3) Sanctions and Enforcement Powers

I) Sanctions

The quasi-criminal sanctions currently contained in CEPA[95] should be retained. The presence of these sanctions in the Act underline the value of respect for the environment itself and stigmatize behaviour causing serious damage to the environment.

II) Enforcement Powers

Consistent with the affirmation of Environment Canada's regulatory mandate through CEPA, inspectors' powers under CEPA[96] should be expanded to include:

* *the authority to issue "cease and desist" or "stop" orders to oblige a regulated party to stop an illegal activity, without the requirement for formal court action;*

* *the authority to issue preventative orders to require regulated parties to take preventative or corrective action before a violation actually occurs;*

* *the authority to require regulated parties to report on how they have complied with "cease and desist" or "stop" orders or preventative orders;*

* *the authority to gain entry where an owner refuses consent; and*

* *the right to serve subpoenas and summons in accordance with s.509(2) and s.701(1) of the Criminal Code.*

4) Citizen Suits

CEPA should be amended to permit citizen suits to ensure that the requirements of CEPA and any regulations made under the Act are met. A separate provision should be included in CEPA with the following features:

* *a clear articulation of any person's right to bring an enforcement action, subject to proof of an offence, or imminent offence, on a balance of probabilities;*

* *provide for the granting of injunctions ordering the person named in such actions to refrain from any action that may constitute or be directed towards the commission of an offence under CEPA, or to do anything necessary to prevent the commission of an offence under CEPA;*

* *where CEPA has been contravened, the person named in an application can be required to develop and implement a restoration plan to repair any damage*

caused to the environment in the course of the violation of CEPA;

* *permits citizens to share in penalties levied against the wrong-doer upon conviction;*

* *in the event that the Attorney-General decides to pursue the case, the citizen, or citizens' group, should be entitled to remain a party to the prosecution;*

* *in the event that the Attorney General settles the case without formal legal proceedings, the citizen should be entitled to participate in the settlement negotiations and should be entitled to become a party to any agreement signed;*

* *specifically stipulate that the court consider whether the case is a test case or raises a novel point of law, in making cost awards in relation to citizen suit actions;*

* *makes available interim cost awards to citizen enforcers;*

* *creates a fund to assist citizen enforcement actions; and*

* *requires that where equivalency agreements are permitted under CEPA, the test for equivalency include the provision of citizen suits under the "equivalent" provincial law.*

ENDNOTES

1. J. William Futrell, "Law of Sustainable Development" (March/April, 1994) 11 The Environmental Forum p.21.

2. Resource Futures International. Evaluation of the Canadian Environmental Protection Act (CEPA) Final Report. (Ottawa: Environment Canada: December, 1993).

3. Richard Brown and Murray Rankin, "Persuasion, Penalties, and Prosecution: Administrative v. Criminal Sanctions" in M. Freidland (ed.) Securing Compliance (Toronto: University of Toronto Press, 1990) p.325.

4. Eugene E. Kupchanko, "A Case For Compliance Through Administration of Licenses and Permits" in Linda F. Duncan (ed.) Environmental Enforcement (Edmonton: Environmental law Centre, 1985) at 8.

5. David Estrin, "A Response" in Linda F. Duncan (ed.) Environmental Enforcement, p.15.

6. See, among others, Eugene E. Kupchanko, "A Case For Compliance Through Administration of Licenses and Permits" and Nicholas Gwyn "Structuring Administrative Discretion: Making Compliance Systems Fairer, More Effective and Less Costly" in Linda F. Duncan (ed.) Environmental Enforcement, pp.8 and 18.

7. See John Z. Swaigen "A Case for Strict Enforcement of Environmental Statutes" in Linda F. Duncan (ed.) Environmental Enforcement, p.2.

8. "Recent polling data indicate that most of the public support the need for strict environmental regulation." See Resource Futures International, Evaluating CEPA, p. 78.

9. See, among others, K. Webb, Pollution Control in Canada: The Regulatory Approach in the 1980's (Ottawa: Law Reform Commission of Canada, 1988) and, generally, M. Friedland (ed.), Securing Compliance (Toronto: University of Toronto Press, 1990).

10. The sanctions provided for under CEPA are, some argue, technically *not* criminal sanctions:

> "...section 115...is linked to contravention of the Act. These are thus regulatory, rather than essentially criminal offenses..."

from Alastair R. Lucas, "Jurisdictional Disputes: Is "Equivalency" a Workable Solution?" in Donna Tingley (ed.) Into The Future: Environmental Law and Policy for the 1990's (Edmonton: Environmental Law Centre, 1990) at 30. Whether or not the provisions fall entirely into the criminal law power of the federal government, the expression of societal approbation is still clear, and still necessary.

11. Law Reform Commission of Canada. Recodifying Criminal Law (Ottawa: Law Reform Commission of Canada, 1987) p.95.

12.Ibid., p. 93.

13.K.Clark and B.Rutherford, "Constitution, Federal-Provincial Relations, Harmonization, and CEPA," in M.Winfield, ed., Reforming CEPA: A Submission to the Standing Committee on Environment and Sustainable Development (Toronto: Canadian Institute for Environmental Law and Policy, 1994).

14. The exact words in the "Issues Overview" document are:

> "In addressing [the issue of sustainable development], several factors should be kept in mind. It is well recognized that sustainable development cannot be promoted entirely by one level of government, or through a single piece of legislation or other instrument. (Reviewing CEPA: An Overview of the Issues, at 6)

This statement suggests that the body that has "well recognized" these conclusions is the federal government, and that the "single piece of legislation" that cannot promote sustainable development all by itself is CEPA.

15. All of the figures cited in the following discussion are taken from Environment Canada, "Office of Enforcement Legal Activities (CEPA and the *Fisheries Act*)", May, 1994.

16.Canada Gazette, Part I, 13 May, 1993, EXTRA No. 3, Vol. 127
Gasoline Regulations -- Amendment. The nature of the amendment to the Gasoline Regulations will be to explicitly state the non-applicability of the regulations to aircraft and competition vehicles.

17. The regulations under CEPA are:

Replacing Previous Regulations under the Clean Air Act:

1. Secondary Lead Smelter Release Regulations; SOR/91-155 (Gaz. 13/3/91, p. 1043).
2. Vinyl Chloride Release Regulations, 1992; SOR/92-631 (Gaz. 2/12/92, p. 4512).
3. Chlor-Alkali Mercury Release Regulations; SOR/90-130 (Gaz. 28/2/90, p. 790) ss. 3(1)-(3), 4, 7; Scheds. I-III: am. SOR/93-231 (Gaz. 2/6/93, p. 2420).
4. Asbestos Mines and Mills Release Regulations; SOR/90-341 (Gaz. 4/7/90, p. 2442) s. 3(1); Scheds. I,II: am. SOR/93-231 (Gaz. 2/6/93, p. 2420).
5. Gasoline Regulations (replacing 2 previous regulations); SOR/90-247 (Gaz. 9/5/90, p. 1700) Sched.: am. SOR/92-587 (Gaz. 21/10/92, p. 4094).
6. Fuels Information Regulations, No. 1; (C.R.C. 1978, c. 407) ss. 4(1), 5(1); Sched. Form 1 items 2(a), 7-8(new); Sched. form 2 ss. 3,4: am. SOR/79-280 (Gaz. 11/4/79, p. 1175).

Replacing Previous Regulations under the Environmental Contaminants Act

7. Chlorobiphenyl Regulations (replacing 3 previous regulations); SOR/91-152 (Gaz. 13/3/91, p. 1030).
8. Polybrominated Biphenyl Regulations, 1989; SOR/90-129 (Gaz. 28/2/90, p. 787).
9. Polychlorinated Terphenyls Regulations, 1989; SOR/90-128 (Gaz. 28/2/90, p. 784).
10. Mirex Regulations, 1989; SOR/90-126 (Gaz. 28/2/90, p. 778).

Replacing Previous Regulations Under the Canada Water Act

11. Phosphorous Concentration Regulations; SOR/89-501 (Gaz. 8/11/89, p. 4510).

Replacing Previous Regulations under the Ocean Dumping Control Act

12. Ocean Dumping Regulations, 1988; SOR/89-500 (Gaz. 8/11/89, p. 4490) ss. 3,4, 4(g)(iii), 4(1), 5, 6; Sched.: am. SOR/93-433 (Gaz. 8/9/93, p. 3621).

New Regulations

13. Contaminated Fuel Regulations; SOR/91-486 (Gaz. 28/8/91, p. 2538).
14. Export and Import of Hazardous Wastes Regulations; SOR/92-637 (Gaz. 2/12/92, p. 4553).
15. Federal Mobile PCB Treatment and Destruction Regulations; SOR/90-5 (Gaz. 3/1/90, p. 20).
16. Gasoline Regulations; SOR/90-247 (Gaz. 9/5/90, p. 1700) Sched.: am. SOR/92-587 (Gaz. 21/10/92, p. 4094).
17- Ozone-depleting Substances Regulations No.1,2,3 and 4.
20. No. 1; SOR/89-351 (Gaz. 19/7/89, p. 3425).
    No. 2; SOR/90-583 (Gaz. 12/9/90, p. 3735).
    No. 3; SOR/90-584 (Gaz. 12/9/90, p. 3720).
    No. 4; SOR/93-214 (Gaz. 19/5/93, p. 2243).
21. Pulp and Paper Mill Defoamer and Wood Chip Regulations; SOR/92-268 (Gaz. 20/5/92, p. 1955).
22. Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations; SOR/92-267 (Gaz. 20/5/92, p. 1940).
23. Storage of PCB Material Regulations; SOR/92-507 (Gaz. 9/9/92, p. 3566).
24. Toxic Substances Export Notification Regulations; SOR/92-634 (Gaz. 2/12/92, p. 4533).

18. Another factor may be the annual National Inspection Plan, a confidential document that targets industries that, on the basis of data received from regulated companies, present the most serious problems to the environment. The Plan is kept confidential in order not to "tip off" bad actor corporations. One might also guess that it is kept confidential so that the corporations not on the list will not be "tipped off" that they may be enjoying a regulation holiday that year.

19. Tom Conway, "Taking Stock of the Traditional Regulatory Approach" in G. Bruce Doern (ed.) Getting it Green: Case Studies in Canadian Environmental Regulation

(Toronto: C.D. Howe Institute, 1990) p.37.

20. Ted Schrecker, "Of Invisible Beasts and the Public Interest: Environmental Cases and the Judicial System" in Robert Boardman (ed.) Canadian Environmental Policy: Ecosystems, Politics and Process (Toronto: Oxford University Press, 1992) p.91.

21. George Hoberg, "Environmental Policy: Alternative Styles" in Michael M. Atkinson (ed.) Governing Canada: Institutions and Public Policy (Toronto: Harcourt Brace Jovanovich, 1993) p.315.

22. These quotations are cited in Toby Vigod and Rick Lindgren, "Overview of Federal Law, Regulation and Policy: A paper presented to the Canadian Institute two day course on Environmental Law and Regulation in Ontario", (Toronto: Canadian Environmental Law Association, 1994) p.2.

23. Cited in Resources Futures International, Evaluating CEPA, p.77.

24. See Vigod and Lindgren, Overview of Federal Law, Regulation and Policy, p.27.

25. A recent article in the Ottawa Citizen ("Environmentalists decry lack of charges for pollution offenses", July 18, 1994, p. A3) makes news of the fact that the federal Department of the Environment does not prosecute and convict polluters in the same way as the Ontario Ministry of Environment and Energy. A Ministry official, Paul Cuillerier, is quoted as saying that the primary role the federal government plays in environmental regulation is: "[not] directed at suspected pollution cases. It's focused instead on the storage of PCBs." See also Tom Conway, "Taking Stock of the Traditional Regulatory Approach."

26. Resource Futures International, Evaluation of CEPA, p.80.

27.See Clark and Rutherford, "The Constitution, Federal-Provincial Relations and CEPA."

28. See, for example, Tom Conway, "Taking Stock of the Traditional Regulatory Approach," p.25.

29. Conway, "Taking Stock of the Regulatory Approach," pp.34-35.

30. This number was provided during a confidential interview with a Department of the Environment official. It should be noted that, in its appendix to its report, RFI indicates that there are a total of 132 inspectors, and a total of 20 investigators working in the five regions (Appendix, p. c-15). However, there are also discrepancies between the information RFI cites regarding prosecutions, and the Department of the Environment's own Prosecution and Enforcement Report. Why the information is inconsistent is unknown.

31. Resource Futures International, Evaluating CEPA p.84.

32. Ibid, p.84.

33. Mark Winfield, "The Federal Department of the Environment as a Test Case," unpublished manuscript, 1991, at 6. Document on file with the Canadian Institute of Environmental Law and Policy, Toronto, Ontario.

34. "The new agency was based principally upon the existing Department of Fisheries and Forestry. However, a number of elements were added from other agencies. The Canadian Meteorological Service was transferred from the Department of transport, as were the Air Pollution Control Division form the Department of National Health and Welfare, the Canadian Wildlife Service from the Department of Indian and Northern Development, the Canadian Land Inventory from the Department of Regional Economic Expansion, and the water related branches of the Department of Energy, Mines and Resources." Mark Winfield, "The Federal Department of the Environment as a Test Case," p.5.

35. Ibid, p.9.

36.Ibid, p.10.

37. "The Department of the Environment did envision for itself a significant responsibility in the control of the environmental impacts of major new development projects. Despite this aim, the limitations to Environment Canada's capacity to assert a meaningful coordination and review role beyond its information function were particularly evident in the structure of the Federal Environmental Assessment Review Process...The procedure was to apply to programs and projects initiated by federal departments and undertakings for which federal funds were sought, which involved federal property or for which there were possible federal regulatory considerations. However, it would be the task of the "initiating" department or the department with the principal funding or regulatory interest, rather than the Department of the Environment, to make a preliminary review of an undertaking and decide if its impacts were significant enough to warrant an environmental assessment review." Ibid, p. 7.

38. Ibid, p. 14.

39.Ibid, p. 17.

40. Resource Futures International, Evaluating CEPA, p.80.

41. Confidential interview.

42. Confidential interview.

43. Resource Futures International, Evaluating CEPA, p.78.

44.See Environmental Prosecutions in Ontario various editions, 1991-1994, (Toronto: Ontario Ministry of Environment and Energy).

45. The Ozone-Depleting Substances, Ocean Dumping and PCB Storage Regulations are the most often enforced. See discussion above, under "Reviewing the Record."

46. Environment Canada. Reviewing CEPA: An Overview of the Issues, 1994, p.9.

47. Latin for "he who as much for the King as for himself;" the special means in the thirteenth century of bringing a citizen enforcement of penal offenses.

48. See Note, "The History and Development of Qui Tam" (1972) Wash. Univ. L. Qtly 81; cited in Kernaghan Webb, "Taking Matters into Their Own Hands," 36 McGill L. J. 770, p.789.

49. See Bowman & Hunter, "Environmental Reforms in Post-Communist Central Europe: From High Hopes to Hard Reality", 13 Michigan J. Int'l L. 301, 351.

50. See Webb, "Taking Matters into Their Own Hands."

51.Ibid., p.791.

52.Ibid.

53. Ibid.

54. Another barrier to citizen participation was the courts' establishment, by the nineteenth century, of the necessity to prove guilt in all penal cases. Proving malicious intent on the behalf of corporate defendants presented then, as it still does today, a formidable obstacle to any prosecutor, private or public. See Webb, "Taking Matters into their Own Hands," pp.791-780.

55. The phrase "regulatory offence" refers to the body of public welfare offenses that do not require proof of "mens rea," or intent, to obtain conviction. See *R. v. City of Sault Ste. Marie* (1977) , [1978] 2 S.C.R. 1299, 40 C.C.C. (2d) 353.

56. The phrase "due diligence" refers to the reverse onus on an accused to show, once their wrong-doing has been proven beyond a reasonable doubt, that what they did to avoid the wrong-doing was reasonable in the circumstances.

57. See Webb, "Taking Matters into their own hands," p.783.

58. "Unlike some other Western legal systems [such as in Germany] Canada follows the English lead in not subjecting government enforcement authorities... to a general duty to prosecute for all cases which come to their attention." Webb, "Taking Matters into their own hands," pp.817-818; citing Glanville Williams, "Discretion in Prosecuting" (1956) Crim.

L. Rev. 222, at p.222.

59. See generally, P. Burns, "Private Prosecutions in Canada: the Law and a Proposal for Change" McGill Law Journal 21 (1975), p.269.

60. There is however, a significant potential disadvantage with the pursuit of a citizen suit in Canada, as under the costs rules for civil actions, an award of costs can be made against an unsuccessful plaintiff. These rule do not apply in quasi-criminal proceedings, such as private prosecutions.

61. See 42 U.S.C. Section 7604 (1982).

62. Steven M. Dunne, "Attorney's Fees for Citizen Enforcement of Environmental Statutes: The Obstacles for Public Interest Law Firms" 9 Stanford Environmental Law Journal 1, at p.1. The single major exception is the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA), 7 U.S.C. Sections 135-136y (1982). Two recent examples are citizen suit provisions included in the 1984 amendments to the *Resource Conservation and Recovery Act* (RCRA) and in the 1986 *Superfund Amendments and Reauthorization Act* (SARA); see 42 U.S.C. Sections 6972, 9659 (1982 & Supp. V 1987). Citizen suits are not unique to U.S. federal environmental legislation; they can be found in recent legislation protecting consumer and other social interests. See Jeffrey G. Miller and the Environmental Law Institute (ELI), Citizen Suits: Private Enforcement of Federal Pollution Control Laws, (Washington, D.C.; 1987)

63. See *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation*, 484 U.S. 49 (1987).

64. See the *Clean Water Act*, s.505(a); the *Resource Conservation and Recovery Act*, s. 7002(a); and the *Clean Air Act*, s.304(a). In one successful citizen suit brought to enforce a waste-water treatment plant's permits, the appellate court found that the trial court's civil penalty award of $3.2 million was too low. The court instructed the lower court to reassess the penalty, suggesting the statutory maximum of $4.2 million was more appropriate under the circumstances. See *Public Interest Research Group of New Jersey v. Powell Duffyn Terminals, Inc.*, 720 F. Supp. 1158 (D,N,J, 1989), aff'd in part and rev'd in part, 913 F.2d 64 (3d Cir. 1990).

65. Under the *Clean Air Act* (S.304(g)(2)), judges may assign up to $100,000 of these penalties to a fund which will be used for "beneficial mitigation projects which are consistent with the *Clean Air Act*."

66. See M. Axline, Environmental Citizen Suits, s.503, at 5-3 & n.5 (1991).

67. Such settlements are called "consent decrees" in the U.S.

68. It is important to understand that such suits are civil actions requiring proof only a "balance of probabilities" only; while explicitly preserving anyone's right to commence a private prosecution for non-compliance of the Act, including requesting relief against an administrator or State agency. See *Clean Air Act*, s. 304.

69. ELI Working Paper, The Role of the Citizen in Environmental Enforcement (Washington D.C.; August 1992; A Working Paper prepared under the auspices of the Environmental Law Institute's Environmental Program for Central and Eastern Europe.), p.1.

70. Many other countries besides the U.S. allow public participation in the enforcement of environmental laws. See Preston, "Public Enforcement of Environmental Laws in Australia," 6 J. Envt'l. L. & Litigation 39 (1991); Webb "Taking matters into their own hands," p.770; Participation and Litigation Rights of Environmental Associations in Europe (M. Fuhr & G. Roller eds. 1991)

71. The 1970 *Michigan Environmental Protection Act* (MEPA) was the first state statute in the U.S. to expressly authorize citizen suits. From 1972 to 1983, only 183 cases were brought. For further discussion see Paul Muldoon, "The Fight for an Environmental Bill of Rights," Alternatives Vol. 15, No.2 1988.

72. See *Chesapeake Bay Foundation v. Bethlehem Steel Co.*, 652 F. Supp. 620, 625 (D. Md. 1987) citing Brief of the U.S. as *amicus curiae* in support of the *Clean Water Act* at 1-2; *Student Public Interest Research Group v. Monsanto*, 600 F.Supp. 1474 (D,N,J, 1985) indicating that the EPA Administrator enthusiastically supported the role of citizens in enforcement proceedings; and Price, "Private Enforcement of the *Clean Water Act*," 1 Nat. Resources & Environment 31, at p. 60 (1986).

73. See Webb, "Taking Matters into Their Own Hands," p.819.

74.For a detailed discussion of the Ontario *Environmental Bill of Rights* see G.Crann, G.Ford, and M.Winfield, Achieving the Holy Grail? A Legal and Political Analysis of the Ontario Environmental Bill of Rights (Toronto: Canadian Institute for Environmental Law and Policy, forthcoming).

75. Note that where the citizen alleges that a law is broken, this suit is equivalent to a private prosecution, whereas the allegation of harm to a public resource would not necessarily involve a prosecution under a particular statute.

76.Ontario *Environmental Bill of Rights*, s.78 and 86(1).

77.Ibid., s.86(2).

78. According to the *Courts of Justice Act* (s.141(1)).

79.Ontario *Environmental Bill of Rights*, s.100. The Ontario Rules of Civil Procedure also allow the courts discretion to award costs against or for a party depending on a number of factors, including the complexity of the proceeding and the importance of the issues (R.57.01(1)(c) and (d)). Although the general rule is that the successful party is entitled to their costs, the fact that a party is successful in a proceeding or a step in a proceeding does not prevent the court from awarding costs against a party in a proper case (R.57.01(2)).

80.Other examples include the Quebec *Environmental Quality Act*, the *Northwest Territories Environment Rights Act*, and the *Yukon Environment Act*.

81. Such an enlightened strategy would prevent potential conflicts from piecemeal enforcement efforts and help the government meet its enforcement objectives.

82. ELI, The Role of the Citizen in Environmental Enforcement, p.35, n.96; citing Greve, "The Private Enforcement of Environmental Law," 65 Tul.L.Rev. 339, 352-53 (1990).

83. A territory in Australia has employed this method of encouragement; see Preston, "Public Enforcement of Environmental Laws in Australia," 6 J. Envtl. L. & Litig. 39 (1991).

84. CEPA, s.2(d); see Webb, "Taking matters into their own hands," p.826.

85. ELI, The Role of the Citizen, p.36 and n.100.

86. Webb suggests that private prosecutions result from distrust of government and inadequate information about the government's enforcement policy. At the very least, if the government does not amend CEPA to include a citizen suit provision, the CEPA Compliance and Enforcement Policy should be amended to reflect the government's policies in respect of private prosecutions. See Webb, pp. 826-828, wherein he suggests that the following be included in such a policy: (1) when will the government decide not to prosecute; (2) what information will be supplied about a decision not to prosecute; (3) how will the AG treat private prosecutions; (4) what ongoing compliance or non-compliance reports should be regularly published; (5) what further information will be made available to the public; (6) will government officials conduct samples supplied to citizens?; (7) what technical assistance will be provided to private prosecutors? and (8) what financial assistance will be provided to private prosecutors? See also Web's specific suggestions for additions to CEPA's "flawed" Enforcement and Compliance Policy along the same lines as just noted. (p.830)

87. CEPA, s.136.

88.CEPA, s.135.

89. See Ontario's *Environmental Bill of Rights*, s. 84 and the U.S. *Clean Air Act*, s.304, for examples.

90.This proposal is based on the application for an injunction in such circumstances currently available to the minister. See CEPA s.135.

91.This would follow the provisions of the Ontario *Environmental Bill of Rights* in this regard. See Ontario EBR, s.95.

92. There is a Canadian precedent in the *Fisheries Act Forfeitures Regulations.*

93. Models for funding to be considered should be the Australian example given, as well as the Canadian examples of the *Intervenor Funding Project Act*, funding under the *Canadian Environmental Assessment Act* and the former Canadian Charter of Rights and freedoms Court Challenges Program.

94. See discussion in Webb, "Taking Matters into their own hands," pp. 820, and 829-830.

95.CEPA, ss.111-115.

96.Currently sections 100-110 of CEPA.

APPENDIX 3

CEPA, CHEMICAL NEW SUBSTANCES, AND BIOTECHNOLOGY

Prepared by:

Mark S. Winfield, Ph.D.
Director of Research

Burkhard Mausberg, B.Sc
Project Officer

Canadian Institute for Environmental Law and Policy
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INTRODUCTION

The new substances provisions of the *Canadian Environmental Protection Act* (CEPA)[1] are among the most important aspects of the Act. Their significance is due to two principal features. First, the pre-commercial evaluation of new substances is the ultimate preventative activity. Rather than waiting for substances to cause damage to the environment or human health, new substances can be assessed and, if necessary, their use controlled, to prevent such outcomes. Secondly, the CEPA new substances provisions are not limited to the assessment of new chemicals. Other new "substances," such as biotechnology products, can also be assessed through the Act. In fact, CEPA was the first environmental statute in Canada to specifically recognize biotechnology products as distinct category of substances.

The screening of new substances prior to commercialization is an ideal opportunity to apply the principle of pollution prevention and a precautionary approach to the management of potentially harmful substances. These provisions of the Act should be used to provide clear signals to industry regarding the types of new substances which are likely to be approved for use in Canada, and the characteristics of substances which will result in prohibitions or severe restrictions on use. This would provide direction to firms in terms of their investment and research and development decisions.

However, the CEPA new substances provisions, as presently drafted, suffer from a number of significant substantive and procedural weaknesses which make the achievement of this goal difficult. This submission to the Standing Committee on Environment and Sustainable Development reviews these deficiencies and makes proposals for reform in three parts. The first part describes the existing new substances provisions of CEPA. Part Two makes proposals for reform of these provisions regarding new *chemical* substances. The chemical new substances provisions of CEPA were proclaimed to be in force in June 1994.

Part Three deals specifically with *biotechnology* products. Due to the consideration that biotechnology products can be self-replicating life forms, these products raise a number of unique issues with respect to the new substances provisions of CEPA. Regulations to implement the CEPA new substances regime for biotechnology products are still under development after a seven-year consultation process.[2] This submission suggests significant revisions to the way in which CEPA addresses new biotechnology products. These recommendations are contained in a proposal for a new biotechnology part for CEPA, and build upon CIELAP's work on the environmental regulation of biotechnology products over the past decade.[3]

PART I: THE EXISTING CEPA NEW SUBSTANCES PROVISIONS

The Substances New to Canada provisions of Part II (TOXIC SUBSTANCES) of CEPA are complex and challenging. Section 25 of CEPA establishes a Domestic Substances List (DSL), consisting of all substances known to have been manufactured or imported into Canada in a quantity of more than 100 kg in any one calendar year, or in Canadian Commerce or used for commercial manufacturing purposes between January 1, 1984 and December 31, 1986. The establishment of a Non-domestic Substances List, consisting of specified substances other than substances placed on the DSL is also provided for. Amendments to the DSL and Non-dSL must be published in the *Canada Gazette*.[4]

Section 26 of CEPA requires that substances not appearing on the DSL not be manufactured or imported into Canada until required information is provided to the Minister, and the established period for assessing this information has expired. These requirements to provide information to the Minister do not apply to substances which are regulated under other federal statutes which provide for the prior notification of the federal government of the import or manufacture of new substances, and provide to an assessment as to whether the substance is "toxic."[5] Exemptions from the CEPA new substances provisions are also provided for materials incidentally generated in the preparation of the substance,[6] substances produced when a substance undergoes a chemical reaction that is incidental to the use of the substance or that results from storage or from environmental factors,[7] and for substances which do not exceed the maximum quantities exempted from the new substances provisions of the Act.[8]

The information requirements for new substances can also be waived where, in the opinion of the Minister, the information is not needed to determine if the substance is "toxic," the substance is used or manufactured in a location where it is sufficiently contained to protect the environment and human life, or it is not feasible or practicable to obtain the data necessary to generate the information.[9] Notice of waivers granted by the Minister must be published in the *Canada Gazette*.[10]

The information regarding new substances to be provided to the Minister is to be prescribed in regulations made under the Act.[11] These regulations may also define substances or establish groups of substances for the purposes of assessment, including groups of biotechnology products, polymers, research and development substances and substances manufactured for export only.[12] Test and laboratory procedures to be followed in the development of test data may also be prescribed.[13]

The Ministers are required to assess the information provided to them regarding a new substance to determine if it is "toxic."[14] The time period for this

assessment may be set through regulation.[15] Where assessment periods are not established in this way, the prescribed assessment period is ninety days.[16] The assessment period can be extended up to the length of the prescribed assessment period where the Minister believes this is necessary to complete the assessment process.[17]

Once the Ministers have assessed any information provided to them regarding a new substance, and they suspect that the substance may be "toxic," they may permit the import or manufacture of the substance subject to any conditions the ministers specify, prohibit the import or manufacture of the substance, or request additional information from any person regarding the substance for the purpose of assessing its "toxicity."[18] The Minister may vary or rescind any condition or prohibition imposed on a substance which is suspected of being "toxic."[19] Notice of the imposition, variation or rescindment of any condition or prohibition must be published in the *Canada Gazette*.[20]

Where additional information is requested the substance cannot be imported or manufactured until the prescribed period for assessing the substance has expired, or ninety days after the provision of the additional information, whichever is later.[21] In the case of prohibitions, a prohibition expires within two years of its imposition unless notice of a proposed regulation to be made under CEPA is published within the *Canada Gazette*. The prohibition then expires on the date the regulation comes into force.[22] However, the structure of CEPA is such that the substances must be found to be "toxic" before such a regulation can be imposed.

When the Minister has been provided with the information required through CEPA for a new substance, the substance is manufactured or imported into Canada in sufficient quantities, and no conditions on is use made on the basis of a suspicion of "toxicity" (s.29(1)(a)) remain in force," the substance must be added to the DSL.[23]

Where a substance is found to be "toxic," the substance may be added to the Toxic Substances List (TSL).[24] Substances may also be deleted from the TSL where the Governor in Council (cabinet) believe that it is no longer necessary to include the substance on the List.[25] Once placed on the TSL, the substance may be made subject to regulations made under CEPA. The Act grants the Governor in Council the power to impose a wide range of conditions and requirements on TSL substances including complete prohibitions on their manufacturing, use, processing, sale, import or export, or on products containing the substance.[26] However, regulations cannot be made under CEPA if, in the opinion of the Governor in Council, the regulation would regulate an aspect of the substance that is regulated by any other federal statute.[27]

Reviews by a Board of Review of additions to and deletions from the TSL may be requested under CEPA. Reviews of regulations regarding TSL substances may

also be requested.[28] The actual establishment of a Board is at the Minister's discretion.[29] Wide standing is provided before Boards of Review[30] and cost awards may be made by Boards.[31] There are, however, no provisions for intervenor funding.

Sections 10-24 of CEPA relate to the disclosure of information. In general, the disclosure of information submitted for the purposes of CEPA is prohibited if requested by the submitter of the information.[32] However, certain types of information may be released when, in the opinion of the Minister, it is necessary for the purposes of the Act.[33] Information of this type may include summaries of health and safety data, occupational exposure studies, and toxicological, clinical or ecological studies of the substance.[34] Physical or chemical data which would reveal the identity of the substance cannot be released without the permission of the person who provides it.[35] Even when substances are added to the DSL or TSL, where the publication of the explicit chemical or biological name of the substance would result in the release of confidential business information, the name may be masked in a manner to be prescribed through regulations made under the Act.[36]

PART II: CEPA AND NEW CHEMICALS: PROBLEMS AND RECOMMENDATIONS FOR REFORM

1. Introduction

The screening of new substances prior to commercialization is an ideal opportunity to apply the principle of pollution prevention and a precautionary approach to the management of potentially harmful substances. These provisions of the Act should be used to provide clear signals to industry regarding the types of new substances which are likely to be approved for use in Canada, and the characteristics of substances which will result in prohibitions or severe restrictions on use. This would provide direction to firms in terms of their investment and research and development decisions.

However, the CEPA new substances provisions, as presently drafted, suffer from a number of significant substantive and procedural weaknesses which make the achievement of this outcome unlikely. This part of CIELAP's submission to the Standing Committee proposes a number of amendments to strengthen the potential effectiveness of the new substances notification and assessment provisions of CEPA regarding chemical new substances.

2. The Definition and Treatment of "Toxic" Substances under CEPA

Serious deficiencies have been identified with respect to the existing definition of "toxicity" under CEPA. In particular, concerns have been expressed that substances with "toxic" properties (e.g Toluene) have been found to be not "toxic" for the purposes of CEPA, due to CEPA's emphasis on the need to establish evidence of presence in the environment of a "toxic" substance in sufficient quantity or concentration to cause "toxic" effects.[37]

a) *The definition of "toxic" for the purposes of CEPA should be refined to stress the intrinsic characteristics of a substance in terms of its potential to cause harm to the environment or human health, rather evidence of its presence in the environment in sufficient quantity or concentration to cause "toxic" effects.*[38]

CEPA currently does not require that substances found to be "toxic" be placed on the Toxic Substances List.

b) *CEPA should be amended to require that new substances found to be "toxic" for the purposes of CEPA be placed on the Toxic Substances List.*

3. A "Sunrise" Protocol for CEPA

Directly related to the definition of "toxicity" is the development of an appropriate regulatory response once a new chemical has been declared toxic. Currently, there is little guidance as to how the Governor in Council will regulate new substances once placed on the Toxic Substances List. While section 34 of CEPA grants the Governor in Council broad powers to regulate new substances, it does not specify exactly what the regulatory response should be. Due to the likelihood of severe environmental and health effects, substances which are "toxic," persistent and bioaccumulative should not be permitted to be used or manufactured in Canada.[39]

Recommendations:

a) *CEPA should be amended to require that new substances which are persistent, bioaccumulative and "toxic" not be permitted to be manufactured, imported or used in Canada (a "sunrise" clause). Thresholds for persistence and bioaccumulation should be established through regulation. Exemptions to the "sunrise" clause should only be allowed in exceptional circumstances.*

b) *Pollution prevention plans, acceptable to the Minister of the Environment, should be required to be developed by notifying parties for "toxic" substances whose use or manufacture are not prohibited through the "sunrise" protocol, prior to their use or manufacturing being permitted within Canada.*

4. Relationship Between CEPA New Substances Provisions and Other Statutes

CEPA states that substances, for which another act of Parliament provides for the assessment of "toxicity" prior to manufacturing or import, are exempt from the new substances provisions of CEPA. In effect, only substances which are not assessed for "toxicity" under other statutes will be regulated under CEPA. However, the criteria for these exemptions are vague, and do not appear to be being applied stringently.

As the principal federal statute dealing with environmental matters, the role of CEPA in providing a minimum standard for the assessment of new substances, regardless of their intended use, should be affirmed and strengthened. The assessment criteria and procedure, and the range of regulatory options available to the federal government regarding new substances provided by another statute, should

be at least equal to CEPA to provide for an exemption from the CEPA new substances requirements.

Recommendations:

(a) *Explicit criteria for establishing the equivalency of other statutes for new substances notification and assessment purposes should be included in the CEPA new substances provisions. These criteria should include:*

- *requirements that notice be given prior to the import, manufacture or sale of a substance and for an assessment of whether it would be considered "toxic" for the purposes of CEPA;*
- *provisions for public participation in the notification and assessment process equivalent to those contained in CEPA; and*
- *the availability of federal control options for substances found to be "toxic" or suspected of being "toxic," equivalent in scope to those available under CEPA.*

(b) *A provision should be added requiring the Governor in Council to publish a list of statutes considered equivalent to CEPA for the purposes of new substances assessments.*

5. Exemptions from CEPA New Substances Provisions

Currently CEPA exempts a range of substances, including impurities, contaminants and partially unreacted materials, and additional substances produced when a new substance under assessment undergoes a chemical reaction incidental to its use or that results from environmental factors affecting the new substance under assessment.[40] By-products of the production, use, storage or environmental exposure of new substances under assessment have the potential to produce significant health or environmental effects of their own, and therefore should be considered in the assessment of new substances.

Recommendation:

CEPA should be amended to ensure that the assessment of new substances includes consideration of the potential health and environmental effects of by-products arising from the production, use, storage or environmental exposure of a new substance.

6. Status of Substances "Suspected of Toxicity."

The existing provisions of CEPA require that substances must go onto the DSL

s.29(1)(a) conditions have been imposed before the end of the assessment period. Such conditions can apparently remain in place indefinitely. This structure provides strong incentives to approve the manufacturing or import of substances suspected of being "toxic," subject to conditions, as if a substance cannot be conclusively shown to be "toxic" and therefore eligible to be added to the TSL, prohibitions on its use or manufacture cannot be maintained beyond a two-year period.

The application of the precautionary principle suggests that substances suspected of being "toxic" should be treated as "toxic" in terms of the available control options, including prohibitions on manufacture, use, import or export, until they can be demonstrated not to be "toxic" for the purposes of CEPA. The possibility of a Board of Review review of the status of a substance prohibited on the basis of a suspicion of "toxicity," might be provided for at the end of the two year period, rather than requiring that the prohibition be replaced with an approval subject to conditions at the end of two years.

Recommendation:

The capacity of the federal government to control the manufacture, or import of substances "suspected of toxicity" should be strengthened. Prohibitions on the import or manufacturing of substances found to be in this category should be permitted to remain in force beyond the two year time limit currently provided by CEPA,[41] so long as the substance continues to be "suspected of toxicity." Requests for Boards of Review on the status of substances "suspected of toxicity" should be permitted two years after the imposition of a prohibition on the import or manufacturing of such a substance.

7. Status of Substances For Which Inadequate Information Exists to Assess "Toxicity."

Section 29 1(c) of CEPA permits the minister to request additional information regarding a substance in order to assess its "toxicity." However, in the event that this additional information proves inadequate to permit an assessment of "toxicity," the minister is not permitted to request additional information, and prohibitions on importing or manufacturing the substance expire, under such circumstances, at the end of the assessment period.[42] These provisions appear to permit the possibility of substances whose "toxicity" has not been fully assessed being manufactured or imported, due to the unavailability of information necessary make such an assessment.

Recommendation:

CEPA should be amended to permit the minister to maintain prohibitions on the

importing or manufacturing of a new substance until sufficient information is provided to permit an assessment of the "toxicity" of the new substance. This approach would follow that taken in the Pest Control Products Regulations regarding the registration of pesticides in such circumstances.[43]

8. Assessment of Substances for Export Only

Section 32(1)(a) of CEPA permits the establishment of notification and assessment categories for substances only intended for export from Canada. This presents the possibility of different, and potentially lower notification requirements and assessment criteria for substances intended for export only, than would be the case for substances intended for domestic use. Such a distinction is inappropriate. Canada should not permit the export of products which have not been fully assessed and approved for use in Canada.

Recommendation:

CEPA should be amended to ensure that new substances intended for export are assessed for "toxicity" in the same way as substances intended for domestic use. The export of products subject to prohibitions on manufacturing or use in Canada should not be permitted. Similarly, substances subject to conditions on use or processing in Canada should not be permitted to be exported for uses or processes which are not permitted in Canada.

9. Assessment Timeframes

Section 32(2) of CEPA provides for a default period of ninety days for the assessment of new substances. The period for the assessment of additional data requested under section 29(1)(c) is also set at ninety days. Given the potential complexity of the data associated with new substances, the default period should be extended.

Recommendation:

The default assessment time limits for assessment contained in sections 32(2) and 29(2) should be extended to a minimum of one hundred eighty days.

10. Field Tests of New Substances Under Assessment

Field tests are situations in which new substances whose toxicity has yet to be fully assessed may be released into the environment, as tests may be necessary to

develop data for s.26 notification information packages. Section 32(1)(g) of CEPA permits the development of regulations regarding test conditions, procedures and practices. However, there is no specific requirement to obtain an approval from Environment Canada and Health Canada to conduct a field test, and it is not clear whether a failure to follow the requirements of a section 32(1)(g) regulation would merely invalidate the resulting information, or if such behaviour would constitute an offense under CEPA.

Recommendation:

CEPA should be amended to require that field tests of new substances receive a specific approval under CEPA. The minister should be permitted to approve tests, approve tests subject to conditions, or to refuse to permit a test. Failure to follow the conditions of a test approval should constitute an offense under CEPA. Failures to follow laboratory procedures required by regulations made under s.32 of CEPA should also constitute an offense under CEPA.

11. Public Participation in Decision-Making

i) Notice and Comment

Opportunities for public participation in the new substances assessment process are extremely limited. Public notices in the *Canada Gazette* are required in four instances:

(a) when information requirements are waived (s.26(5));
(b) when conditions or prohibitions are imposed on substances suspected of being "toxic," (s.29(5));
(c) when substances are added to or deleted from the DSL (s.25(4)) or the TSL; and
(d) when regulations are proposed for TSL substances (s.48).

No public notice is required when information regarding new substances is received by the Ministers (i.e. notifications), or when field tests of new substances are conducted for the purposes of developing data for new substances assessments.

Expanded public notice and comment provisions will ensure that the public is aware of, and has an opportunity to participate in, decisions regarding the approval for use in Canada of substances which may negatively affect the environment and human health. Notice and comment provisions would also improve accountability in the administration of CEPA. In addition, opportunities for public participation may enhance the quality of decision-making by providing members of the public, including non-governmental organizations and members of the academic community, with an opportunity to bring to the attention of CEPA administrators information of which they

might not otherwise be aware.

Recommendation:

CEPA should be amended to require public notice in the Canada Gazette when:

* *notification information packages are received by Environment Canada and Health Canada regarding new substances; and*
* *field tests involving the open environmental release of a new substance are proposed.*

In addition to providing notice in the Canada Gazette, the minister should be permitted to provide public notice of an impending decision under CEPA in any other manner which he or she feels appropriate. Public comment periods of not less than sixty days should be provided following all public notices provided under CEPA.

Additional public notice requirements regarding field tests may be appropriate, as such tests may involve the potential release of substances into the environment whose "toxicity" is yet to be fully assessed. Notice of proposals for field tests might be required to be published in a newspaper of general circulation in vicinity of the test. CEPA s.71(1)(d) provides a precedent for such public notice requirements. Requirements for the direct notification of the owners and occupiers of lands adjacent to a test site should also be included.

ii) Appeals

The current appeal provisions in CEPA are limited and unbalanced. No appeals to a Board of Review are available when substances are added to the DSL (in effect, when there is a finding of not "toxic"). In addition, no appeals are available when information requirements are waived,[44] when the manufacturing or import substances suspected of being "toxic" are approved with conditions, or when prohibitions or conditions on such substances are varied.[45] No appeal processes are apparent regarding the approval of field tests involving open releases of new substances under assessment.

Regulations proposed under s.34 in relation to TSL substances can be the subject of a request for a Board of Review. However, the regulation of substances placed on the TSL is not automatic, and there is no corresponding provision permitting a request for a Board of Review to inquire as to the need for a regulation to prohibit or control the manufacturing, use, processing, sale, offering for sale, import or export of a "toxic" substance if such a regulation has not been introduced by the Governor-in-Council. It should be noted that provisions of the recently enacted Ontario *Environmental Bill of Rights* permit members of the public to request the development

of new regulations.[46]

Recommendation:

CEPA should be amended to permit any person to file a notice of objection requesting a Board of Review regarding:

* *the addition of substances to the DSL (s.30);*
* *the waiving of information requirements (s.26);*
* *the approval with conditions or when prohibitions or conditions regarding substances suspected of being "toxic" are varied or rescinded (s.29);*
* *the approval of field tests of new substances, particularly those involving open release into the environment; and*
* *the need for a regulation to prohibit or control the use, manufacture, processing, sale, offering for sale, import or export of a "toxic" substance or a product containing a "toxic" substance.*

Under each of these circumstances a Board of Review should be required to be established, except for when the request can be shown to be frivolous or vexatious. Ministers should be required to respond to notices of objection requesting the establishment of Boards of Review within thirty days of receiving the request.

iii) Intervenor Funding

The Board of Review provisions of CEPA currently provide for final and interim cost awards.[47] However, there are no provisions for the provision of intervenor funding to *bona fide* public interest intervenors in Board of Review proceedings. This represents a serious barrier to the use of the Board of Review process by members of the public. Boards of Review are likely to involve complex technical, scientific and legal issues. Consequently, public interest intervenors may require legal and expert assistance to participate effectively in their proceedings. The need for intervenor funding in public hearing and inquiry processes is well-established,[48] and numerous examples of intervenor funding arrangements exist under federal and provincial legislation, including the *Canadian Environmental Assessment Act*[49] and the Ontario *Intervenor Funding Project Act.*[50]

Recommendation:

CEPA should be amended to provide for intervenor funding assistance to bona fide public interest intervenors in CEPA Board of Review Proceedings. A fund should be established to provide for intervenor funding awards. This might be funded through fines imposed in relation to offenses under CEPA, charges imposed in the use of

"toxic" chemicals,[51] *and the imposition of user fees for the new substance notifications and assessments.*

12. Access to Information[52]

The current provisions of CEPA place significant constraints on the ability of members of the public to access information regarding potentially toxic substances which may be released into the Canadian environment. The paramountcy of the goal of protecting confidential business information (CBI) regarding the nature of potential pollutants, which are a matter public interest and in the public domain, cannot be accepted in principle.

The protection of critical information, particularly regarding the chemical and physical characteristics of substances and the full contents of health and safety, occupational exposure, toxicological, clinical and ecological studies as CBI undermines public accountability for decision-making under CEPA. The lack of full access to information of this nature also limits the capacity of members of the public to comment substantively on information regarding new substances, to assess the adequacy of proposed control measures, and to determine whether requests for Boards of Review are appropriate.

Environment Canada interprets CEPA section 20 as requiring it to keep such information confidential unless a request for information is submitted under the *Access to Information Act* (AIA) and the Information Commissioner determines that the information is not confidential.[53] The process of applying for information under the AIA is slow, unwieldy and likely to be unable to provide adequate responses to public requests for information in the context of the timeframes provided by CEPA for the assessment of new substances.

CEPA's provisions regarding the protection of confidential business information are much wider than is the case in corresponding U.S. legislation. In the United States, only "trade secrets" can be kept confidential. "Trade secrets" include information such as formulas or compounds which are used in a business, know only to that business and its employees and which give that business a commercial advantage over competitors.[54] A similar standard should be employed in CEPA.

Furthermore, confidentiality requests should not be permissible for information relating to substances which may be released into the environment, either through waste streams or products, or for information relating to the environmental effects resulting from the use or processing of the substance. Confidentiality claims should also be disallowed regarding information regarding potential occupational exposure to new substances under assessment.[55]

Recommendations:

To avoid abuse of its confidentiality provisions, CEPA should be amended to provide that:

* *the definition of what can be kept confidential be narrowed to include only "trade secrets;"*

* *the claimant for confidentiality be required to provide supportive evidence of confidentiality when making a claim;*

* *requests for confidentiality on the identities of substances which will, or may be, released into the environment, not be permitted;*

* *requests for confidentiality should not be permitted regarding information on toxicology, ecological effects, epidemiology or health and safety studies;*[56] *and*

* *there be a public appeal process regarding determinations that information is confidential.*

13. Conclusions

The new substances provisions of CEPA are potentially one of the Act's most important components. The screening and assessment of new chemical substances prior to their release into the environment is the ultimate preventative step. However, in order to be fully effective, the chemical new substances provisions of CEPA require a number of amendments.

In particular, the relationship between the new substances provisions of CEPA and similar provisions contained in other statutes must be clarified, and the status of the CEPA provisions as providing a minimum assessment standard for all new substances affirmed. In addition, opportunities for public participation in the new substances assessment and approval process must be strengthened, as well as public access to information regarding new substances. The Act must also be amended to widen the scope of the assessment of the potential environmental and health effects of new chemical substances, strengthen the ability of the federal government to deal with substances "suspected of toxicity" or for which inadequate information to assess exists, provide clear provisions regarding the authorization and regulation of field tests of new substances, provide for more realistic assessment time frames, and to ensure the full assessment of substances intended for export from Canada.

PART III: CEPA AND NEW PRODUCTS OF BIOTECHNOLOGY: PROBLEMS AND RECOMMENDATIONS FOR REFORM

1. Introduction

The new substances provisions of CEPA are designed to include biotechnology products as well as new chemicals. However, the regulation of new biotechnology products presents a number of special challenges beyond those provided by new chemical substance. Indeed, Environment Canada and Health Canada have recognized biotechnology products as a unique category of new substances. The departments have been developing a separate notification regulation of biotechnology products under section 32 of CEPA. A commitment to establish a national regulatory regime to address the environmental risks of the biotechnology industry by 1995 was made in the federal government's Green Plan.[57]

i) What is Biotechnology?

Biotechnology is defined in CEPA as:[58]

> "the application of science and engineering in the direct or indirect use of living organisms or parts or products of living organisms in their natural or modified forms."

Such a broad definition includes a wide range of activities, many of which are hardly new or revolutionary. Fermentation in the making of beer or the biological processes used in sewage treatment plants, for example, can be considered applications of biotechnology. Most agricultural practices could be described in the same way.

Modern biotechnology, however, is different from these traditional practices. All living things have the same genetic material called DNA (deoxyribonucleic acid), the hereditary information code which determines life. What makes each species, and each member of a species, unique, is the distinctive arrangement of its DNA. Since the early 1970s, scientists have been able to take this genetic material from one species and implant it into an unrelated one. By doing so, they can add very specific characteristics to plants, animals, and microorganisms, resulting in genetic combinations which otherwise would not naturally occur. This is called genetic engineering and it is fundamentally different from traditional genetics where scientists could only breed closely related species. According to one commentator,

> "[T]he principal significance of the new technology was that it made possible the transfer of genes between species with considerable specificity and ease.

It, therefore, removed the specific barriers of conventional genetics."[59]

Genetic engineering means that the desirable characteristics or attributes of one organism or species, whether a plant, or animal, or bacteria can be transferred to another to create new life forms or "genotypes." These new life forms, in turn, can pass on the new characteristics to their offspring.

ii) The Biotechnology Industry and Its Applications

The discovery and refinement of genetic engineering techniques has been followed by the emergence of a "biotechnology" industry over the past decade. Applications of biotechnology involving the use of both engineered and naturally occurring life forms are now approaching the commercialization stage. Many of the applications involve the potential or deliberate release of biotechnology products into the environment. The fields in which biotechnology applications involving the environmental release of biotechnology products are under development include the following:

a) Agriculture

The range of potential applications of biotechnology to agriculture are enormous. They include the development modified engineered (transgenic) crops, new applications of naturally occurring and genetically engineered microorganisms (GEMs), and animal health and production products.

Transgenic crops: Using a variety of techniques, scientists are now able to breed crops with specific characteristics or traits. Some new crop strains are being developed to improve crop nutritional and growth characteristics. However, the overwhelming majority of the transgenic crops presently under development in Canada are to increase resistance to specific pesticides.[60] Monsanto, for example, is developing canola (a plant used to make vegetable oil) to be resistant to its herbicide glyphosate. This would permit use of the herbicide against weeds without affecting that specific strain of canola.

GEMs: One of the earlier applications of biotechnology was the use of microbes that can be sprayed on temperature-sensitive plants and crops to help protect them from frost damage. This so-called "ice-minus" bacterium allows longer growing seasons and a reduction in crop loss due to late frosts. The use of microbes to increase nitrogen fixation in soil is also under investigation.[61]

Animal Products: Biotechnology products currently under development include drugs to induce growth in animals. In addition, the controversial hormone recombinant bovine Somatotropin (rbST), produced by genetic engineering techniques, can be

injected into cows to substantially increase their milk production. The development of animal vaccines using biotechnology techniques to fight chronic cattle diseases such as shipping fever and bovine virus diarrhoea is also taking place.

b) Mining and Petrochemicals

There are a variety of biotechnology applications by the mining industry under development. Microorganisms may, for example, be able to leach minerals such as copper, nickel, and gold from ores and tailings in concentrations that could not be extracted economically by traditional means.[62]

With respect to petrochemicals, the desulfurization of coal and crude oil through the use of modified microorganisms is currently under investigation.[63] The use of microbes to enhance oil recovery, to produce fuel, and in the production of enzymes and specialty chemicals is also being explored.[64]

c) Waste water Treatment

New biotechnology products such as microorganisms may also be used to accelerate processes of degrading and removing toxic substances from inoculated sludge at waste water treatment facilities.[65] The Canada Centre for Inland Waters in Burlington, and the National Research Council's Biotechnology Research Institute in Montreal, for example, have research programs oriented toward the use of biotechnology for the treatment of municipal and industrial waste water.

d) Bioremediation

Other uses that may further environmental protection goals include the creation and use of microorganisms capable of de-toxifying hazardous waste or rendering organic pollutants such as polychlorinated biphenyls (PCBs) less toxic. Similarly, new and naturally occurring life forms may be able to clean up oil and other chemical spills, providing the foundation for new waste management technologies.[66]

e) Forestry

Canadian forestry companies are currently undertaking biotechnology research in three main areas. These are pulp and paper manufacturing, the regeneration of harvested forests, and the protection of existing and new forests. In the pulp and paper sector, research is under way into new enzyme technologies, allowing for significant reductions in the use of chemical bleaching agents. Research into

techniques related to reforestation is being pursued vigorously in a number of laboratories across Canada. Methods have been developed to rapidly produce thousands of genetically-improved trees. This is to facilitate faster reforestation. In addition, researchers at Forestry Canada are developing technologies for biological pest control as alternatives to synthetic chemical treatments.[67]

f) Fisheries

A number of applications of biotechnology to fisheries are under development to increase the tolerance of fish to environmental stresses, and the increase their rate of growth. Examples include the modification of Atlantic salmon to carry the "antifreeze gene" taken from winter flounder, and the modification of coho salmon to carry a growth hormone gene from sockeye salmon.[68]

iii) The Unique Risks of Biotechnology Products

Biotechnology products present a number of special environmental and health risks which distinguish them from traditional chemical substances. Two major areas of concern have been identified in this regard:

(a) Many biotechnology products include life-forms which are self-replicating. Once released into the environment, they can reproduce, spread and mutate and transfer genetic material. The control of biotechnology products, and their genetic material, once in the environment, will therefore be difficult, if not impossible.

(b) The technologies employed in the development of many new biotechnology products have only emerged over the past twenty years (especially recombinant DNA and cell fusion technologies). The evaluation of such products for potential environmental damage is surrounded by a great deal of uncertainty. Indeed, the scientific literature reflects wide concerns regarding the lack of adequate methodologies and data to properly assess the environmental and health effects of the products of biotechnology.[69]

Methods of predicting the consequences of deliberate introduction of new life forms in the environment are still under development. The potential risks associated with biotechnology products are often described as being of a "low probability, high consequence risk."[70] In other words, although the chances of something going wrong may be very slight, if something does go wrong, the ecological consequences may be tremendous. As a result, we must ask *not* only whether something may go wrong, but also what is the present capability to address the consequences if it

does.[71]

These concerns are reinforced by the consideration that, in many cases, biotechnology products *must* survive, grow and multiply in the environment in order to fulfil their intended functions. In general, the environmental risks which have been associated with the release of biotechnology products into the environment are predicted on the basis of extension of past experiences with the introduction of "exotic" species, such as zebra mussel, dutch elm beetle, common sparrow, gypsy moth and various species of plants, including the purple loosestrife, into existing ecosystems.[72] The specific environmental risks which have been identified in relation to biotechnology products include:[73]

* the creation of new pests, such as the escape of a transgenic salt tolerant rice from cultivated fields into estuaries;
* the enhancement of the effects of existing pests or creation of new pests through hybridization or gene transfer to related plants or microorganisms;
* the enhancement of the effects of existing pests as a result of the selective pressures provided by plants modified for pest resistance or intensified pesticide arising in conjunction with the modification of plants for pesticide resistance;
* infectivity, pathogenicity, toxicity or other harm to non-target species, including humans;
* disruptive effects on biotic communities, resulting in the elimination of wild or desirable natural species through competition or interference;
* adverse effects on ecosystem processes and functions, such as nutrient cycling;
* incomplete degradation of hazardous chemicals by microorganisms employed in bioremediation and waste water treatment, leading to the production of even more toxic by-products.

These specific risks sometimes overshadow the more general risk of reducing biological diversity in any given ecosystem. Introduced species may, for example, disturb food-chains or habitats, which in turn will affect biodiversity.[74] Biotechnology can also threaten the biodiversity through its implicit drive to breed uniformity in plants and animals, and by furthering and encouraging monocultures.

It is important to note that these environmental and health risks are not limited to the introduction of genetically engineered or modified organisms. Naturally occurring organisms can behave as "exotic" species when introduced into ecosystems of which they are not native inhabitants as well. In addition, the introduction of a naturally occurring species into a natural habitat can have disruptive effects if the species is introduced in very high concentrations or quantities. It has also been argued that certain naturally occurring species of microorganisms that have potential to be used in bioremediation may be opportunistic human pathogens.[75]

iv) Biotechnology and "Toxicity"

The "toxicity" test forms the basis for CEPA's regulation of new substances. New substances must be found "toxic" under the definition employed by CEPA in order to be regulated under the Act. A number of problems have been identified with the definition and application of the concept of "toxicity" under CEPA in relation to chemical substances.[76] Furthermore, the "toxicity" standard, as it is presently applied in the context of chemical substances appears to be too narrow an evaluative structure in relation to the potential scope of the effects of the use of biotechnology products. In addition, it an be excessively stringent test in relation to the level of uncertainty regarding the environmental and health effects of these products. This is especially true with respect to the potential long-term, indirect and cumulative environmental and health risks associated with biotechnology products.

v) Biotechnology and Federal Jurisdiction

The "toxic" standard employed in CEPA was largely developed for the purpose of establishing federal constitutional authority to regulate potentially harmful chemical substances. It was intended to define a distinct and bounded category of substances to be controlled through the federal parliament's general power to legislate for the Peace, Order and Good Government of Canada.

However, the federal authority to regulate biotechnology products may not require the establishment of "toxicity," as is the case with chemical products. The federal parliament's capacity to legislate on new subjects of national significance, such as aeronautics,[77] radio communications,[78] nuclear energy,[79] and the national capital area,[80] is well established. Biotechnology products which are intended to be, or may be, released into the environment, particularly those involving the application of recombinant DNA and cell fusion technologies seem to fall within this category.[81] Biotechnology products are a distinct and bounded category of subjects and therefore would appear to be able to meet the test of "singleness, distinctiveness and indivisibility," clearly distinguishing them from matters of provincial concern.[82]

In addition, a federal notification, assessment, and registration system for biotechnology products would appear to be something whose "scale of impact on provincial jurisdiction is reconcilable with the fundamental distribution of legislative power under the Constitution."[83] It is also unlikely that an effective notification, assessment and registration system could be established by the provinces acting individually or cooperatively.[84] Given the status of biotechnology products as living organisms capable of being transported and of reproducing, the failure of one province to cooperate would carry with it potential adverse consequences for residents of other provinces. Those few provinces which have considered the

regulation of biotechnology products appear to concede primary responsibility for their assessment and approval for use in Canada to the federal government.[85] A division of responsibility similar to that which has emerged regarding pesticides, in which the federal government assesses and registers products for general use in Canada, and the provinces authorize specific applications,[86] appears to be emerging for biotechnology products which may be released into the environment.

These consideration support the conclusion that the federal government has the constitutional authority regulate biotechnology products in Canada through its power to legislate of the Peace, Order and Good Government of Canada, without having to establish that they are "toxic" for the purposes of CEPA. Federal jurisdiction over Agriculture,[87] Fisheries,[88] Trade and Commerce,[89] and criminal law in relation to public health,[90] provide additional bases for the establishment of federal regulatory authority over biotechnology products.

vi) Biotechnology and CEPA

The disconnection of federal regulatory authority over biotechnology products from the need to establish "toxicity" would provide a number of advantages. The health and environmental effects of new biotechnology products could continue to be assessed as they are now under CEPA. However, a firm establishment of "toxicity" would not be required for the federal government to take regulatory action to prohibit or impose conditions on the processing, use, manufacture, sale, offering for sale, import or export of new biotechnology products or products containing new biotechnology products. The proposal of this more flexible standard reflects the level of uncertainty which currently exists regarding the potential environmental and health effects of biotechnology products.

Furthermore, if the federal role is not limited to regulation on the basis of the establishment of "toxicity," the assessment and regulatory process for biotechnology products could be widened to include broader considerations of the potential environmental and human health effects of these new products. Such effects could include the long-term direct and indirect cumulative environmental effects of the commercial scale use of a biotechnology product. This would more effectively capture the range of possible environmental and health effects which have been identified with respect to biotechnology applications in relation to deliberate or accidental releases into the environment.

This approach would also permit the range of factors to be considered in the evaluation of biotechnology products to be expanded. Concerns have been expressed by a wide range of stakeholders regarding the value and purpose of many of the emerging applications of biotechnology. It has been argued, for example, that the modification of crops for resistance to specific herbicides will entrench the

dependance of agricultural production on external chemical inputs. This may result in a further narrowing of the genetic base employed for agricultural purposes, thereby undermining efforts to development more environmentally sustainable agricultural practices.[91] Similarly, it has been contended that the development of genetically modified faster growing trees to be used in reforestation efforts would address a symptom, rather than the cause, of the problem of the overharvesting of trees.[92]

The recent controversy over the approval for use in Canada of rbST has demonstrated in the inability of the existing regulatory system for biotechnology products, with its narrowly defined focus on safety, to even consider wider policy issues of this nature.[93] The need to widen the range of factors considered in the assessment of biotechnology products was reflected in the recommendations of the Standing Committee of the House of Commons on Agriculture and Agri-Food in its April 1994 report rbST in Canada.[94] This stress on the consideration of the wider environmental, ethical and social impacts of biotechnology applications is a reflection of the potential power of the technology and the lack of consensus within Canadian society regarding the appropriateness of many of the applications of biotechnology which are emerging.

The unique characteristics of many biotechnology products as life forms, the level of uncertainty regarding the assessment of their potential environmental and human health impacts, and lack of consensus regarding the value of many of their applications makes apparent the need to address these products differently from chemical new substances under CEPA. A new and separate part of CEPA should be enacted to deal specifically with biotechnology products. This part would, in effect, establish a federal registration and regulatory system for biotechnology products which may enter the Canadian environment or be exported from Canada.

2. A New Biotechnology Part for CEPA

i) Introduction

The proposed new Biotechnology Part for CEPA would provide for the evaluation and listing for use, manufacture, processing, sale, offering for sale, import and export of biotechnology products, and products containing new biotechnology products which may be released into the environment. The proposed part follows the notification and assessment structure of the existing CEPA new substances provisions. However, the proposed section would expand the range of evaluative criteria employed in the assessment of biotechnology products, and remove the need to establish "toxicity" in order for the federal government to control the use of a biotechnology product.

ii) Scope

As Canada's principal environmental protection statute, CEPA should provide a framework for the evaluation of all biotechnology products which may be released into the environment. This would include all releases of genetically engineered organisms, and releases of naturally-occurring organisms into habitats in which they do not occur naturally, or in quantities or concentrations beyond those in which they naturally occur. Enabling provisions for notification and assessment requirements would be established to cover all stages of product development in which environmental releases might occur, from laboratory research to commercialization.

The existing provisions of CEPA require that the triggers for the application of the CEPA New Substances provisions (s.26(3)), additions to the DSL (s.30) and the development of notification groups in new substances regulations (s.32(1)h) be expressed in terms of quantities. Given the nature of most biotechnology products self-replicating life forms, such triggers are inappropriate for biotechnology products.[95] The proposed biotechnology Part would permit the use of non-quantity based triggers for biotechnology products.

iii) Relationship Between CEPA and other Statutes Regulating Biotechnology Products

Potential releases of biotechnology products into the environment are currently regulated under a number of federal statutes administered by a variety of departments. Among the most important of these are the *Pest Control Products Act*,[96] the *Seeds Act*,[97] the *Fertilizers Act*,[98] the *Plant Protection Act*[99] and the *Fisheries Act*.[100] However, very few of the statutes under which other departments propose to use in the regulation of biotechnology products, appear to be able to meet even the existing CEPA s.26(3) exemption criteria.[101] As is proposed with respect to new chemicals, biotechnology products could continue exempted from the requirements of the CEPA notification and assessment process, if they are regulated through another statute which clearly provides for an equivalent process.

However, the status of CEPA as providing the minimum standards for the assessment of biotechnology products should be affirmed and strengthened. Explicit criteria for establishing the equivalency of other statutes for biotechnology notification and assessment purposes should be included in the proposed CEPA biotechnology part. These criteria should include:

* requirements that notice be given prior to the testing, import, manufacture, use or sale of the substances and for an assessment of the:
  - purpose;
  - efficacy;

- direct, indirect and cumulative environmental and human health impacts; and
- availability of alternatives to the biotechnology product;

* provisions for public participation in the notice and assessment process equivalent to those contained in the CEPA biotechnology part; and
* the availability of federal control options equivalent in scope to those available under the CEPA biotechnology part.

A provision should also be included requiring the Governor in Council to publish a list of statutes considered equivalent to CEPA for the purpose of the assessment of new biotechnology products.

iv) Information Requirements

The biotechnology Part of CEPA would contain a section similar to the existing provisions of s.32 of CEPA, permitting the development of regulations establishing information requirements for biotechnology products. These requirements would include information regarding:

* the purpose for which the biotechnology product has been developed;
* the effectiveness of the product for its intended purpose;
* the method of use and mode of action of the product;
* biological and ecological characteristics of the biotechnology product;[102]
* potential immediate and long-term direct and indirect environmental and human health effects of the biotechnology product, including the cumulative effects of commercial scale use and impacts on biodiversity;[103]
* availability and effectiveness of monitoring, control, waste treatment and emergency response plans with respect to the biotechnology product;[104]
* the availability of alternative means of achieving the product's purpose which may pose lower environmental and health risks; and
* any other information which the minister determines necessary to assess the potential environmental and human health impacts of the biotechnology product.

These requirements are based on those currently under development by Environment Canada and Health Canada for the CEPA biotechnology notification regulation[105], Agriculture and Agri-Food Canada for the environmental assessment of genetically modified plants[106] and the United States Environmental Protection Agency for the assessment of biotechnology products under the *Toxic Substances Control Act*.[107] However they are also expanded to include information regarding the purpose, effectiveness, availability of alternatives, potential long-term direct, indirect and cumulative environmental and human health effects of the use of the biotechnology product.

The Government of Canada's acceptance of the need for the assessment of the effectiveness of biotechnology products was affirmed in the its August 1994 response to the Standing Committee on Agriculture and Agri-Food's report rbST in Canada[108] and a "merit" test is currently applied in the registration process for pest control products under the *Pest Control Products Regulations* made under the *Pest Control Products Act*.[109] The inclusion of the consideration the purpose, availability of alternatives and long-term indirect and cumulative environmental and human health effects is intended to bring principles widely accepted as components of environmental assessment procedures[110] into the assessment of biotechnology products. This is to provide a means of addressing the range of concerns regarding the value, purpose and potential long-term environmental and health effects of biotechnology products which may be released into the environment, that have been expressed by many stakeholders.[111]

v) Field Tests and Laboratory Procedures

As noted in the chemical new substances part of this submission, field tests involve potential releases of new substances into the environment whose potential environmental and human health effects have yet to be fully assessed and evaluated. As is proposed for new chemical substances, a separate section regarding the field tests of biotechnology products should be included in the biotechnology part of CEPA.

Field tests of new biotechnology products should require a specific approval under CEPA. The minister should be permitted to approve tests, approve tests subject to conditions, or to refuse to permit a test. Failure to follow the conditions of a test approval should constitute an offense under CEPA. Notice of proposals for field tests should be required to be published in a newspaper of general circulation in vicinity of the test.[112] Requirements for the direct notification of the owners and occupiers of lands adjacent to the test site should also be included. A comment period of not less than sixty days should follow notice of a proposed field test. Mechanisms to provide for the filing of notices of objection and the establishment of Boards of Review in the event that members of the public object to the conduct of a field test are also required.

This section should also establish the capacity of the Governor-in-Council to make regulations regarding laboratory procedures regarding biotechnology products. Failures to follow laboratory procedures required by regulations should constitute an offense under CEPA.

vi) Assessment and Listing Process

a) Public Participation

The public participation provisions of the biotechnology product assessment process would parallel those proposed for the assessment of new chemical substances under CEPA. This would include:

(a) public notification when applications for the approval of the manufacture, use, import or export of new biotechnology products, or products containing new biotechnology products are made, in the *Canada Gazette*.
(b) provision of a public comment period of not less than ninety days following the notice;
(b) public access to the information submitted in response to the to the information requirements regarding new biotechnology products in a manner consistent with the principles outlined in section **11** of the Chemical New Substances section (**Part II**) of this submission.

b) Assessment Criteria

The proposed biotechnology part would outline the criteria to be considered by the minister in assessing a new biotechnology product. In determining whether to approve, approve with conditions or prohibit the use, manufacturing, processing, sale, offering for sale, import or export of a new biotechnology product or products containing the new biotechnology product, the minster should consider:

* the information received from the proponents;
* comments received from members of the public; and
* information available from any other source regarding:
  - the purpose for which the biotechnology product has been developed;
  - the effectiveness of the product for its intended purpose;
  - the biological and ecological characteristics of the biotechnology product
  - the potential immediate and long-term direct and indirect environmental and human health effects of the product, including the cumulative effects of commercial scale use and impacts on biodiversity;
  - the availability and likely effectiveness of monitoring, control, waste treatment and emergency response plans with respect to the product; and
  - the availability of alternative means of achieving the product's purpose which may pose lower environmental and health risks.

c) Approvals

At the conclusion of the public comment and product assessment period, the minister would be permitted to:

* approve manufacture, use, processing, release or discharge into the environment, sale, offering for sale, import or export the new biotechnology product and products containing the new biotechnology product without conditions:
* approve the manufacture, use processing, release or discharge into the environment, sale, offering for sale, import or export of the new biotechnology product and products containing the new biotechnology product subject to any conditions which the minister chooses to impose; or
* impose a total, partial, or conditional prohibition of the manufacture, use, processing, release or discharge into the environment, sale, offering for sale, import or export of the biotechnology product or a product containing the new biotechnology product.

Products whose assessment demonstrates:

* the potential for harm to human health or the environment;
* ineffectiveness for their intended purpose;
* the availability of alternatives which pose a lower potential for harm to the environment or human health; or
* whose intended purpose is found to not to serve the public interest,

should not be approved for use or manufacturing in Canada.

Products approved without condition would be placed on a Biotechnology Domestic Substances List. Products approved subject to conditions could be placed on a Biotechnology Conditional Domestic Substances List. Products subject to prohibitions would be placed on a Prohibited Biotechnology Substances List. Approvals, conditional approvals and prohibitions could be varied by the minister if new information regarding the biotechnology product becomes available. Notice of the minister's intention to vary such conditions should have to be provided in the *Canada Gazette*, and be followed by a public comment period of not less than ninety days.

d) Notice of Approval

Notice of the Minister's decision would be provided in the *Canada Gazette*, to the applicant, and to any person who made a comment during the comment period. A decision to approve or approve with conditions would not take effect for period of thirty days. This would provide an opportunity for the filing of notices of objection by any person. Notice and opportunities to file notices of objection should also be available when variations to approvals, approvals with conditions and prohibitions are

proposed.

e) Appeals

The filing of a notice of objection would be the first step is seeking a Board of Review regarding the minister's decision regarding a biotechnology product. The procedures for Boards of Review regarding biotechnology products would follow those proposed for Boards of Review regarding chemical new substances (**Part II 7.2.** and **7.3.** of this paper) Boards would have to be established unless the request is frivolous or vexatious, approvals should be suspended until any notice of objection is resolved, and intervenor funding should be provided for *bona fide* public interest intervenors

viii) Biotechnology Environmental Release Database

The biotechnology part of CEPA should provide for the establishment of a data-base on the environmental release of all biotechnology products in Canada. Such a data base would be of assistance to governments, researchers, and other members of the public in assessing the overall use and effects of biotechnology products released into the Canadian environment. All environmental releases should be required to be entered into the data base, and members of the public should have direct access to the data base.

3. Conclusions

Biotechnology products, being self-replicating life forms, represent a unique category of new substances, distinct from chemical new substances. Therefore they should be dealt with through a new separate part of CEPA. This part would follow the structure of the existing new substances provisions. However, the scope of the evaluative criteria would be expanded to include factors beyond the assessment of "toxicity," as currently defined for the purposes of CEPA. This is to reflect to the potential range of environmental and health impacts associated with biotechnology products and the concerns which have been expressed by many stakeholders regarding the merit and value of many of these products.

In addition, "toxicity" would not have to be established in order to justify the exercise of federal regulatory authority over biotechnology products. This approach is proposed to take into consideration the level of uncertainty which currently exists regarding the assessment of the potential environmental and health effects of biotechnology which may enter the environment. Furthermore, in a manner consistent with CIELAP's proposals regarding the chemical new substances provisions of CEPA,

the status of CEPA as providing the basic model of the evaluation of the effects of environmental releases of biotechnology would be affirmed and strengthened. Opportunities for public participation in decision-making regarding biotechnology products would also be increased.

This proposal for the establishment of a separate biotechnology part of CEPA is intended to provide the basis of a regulatory structure for biotechnology products which would ensure the protection of environmental integrity and human health, and strengthen public confidence in the government of Canada evaluative and regulatory processes for these products.

ENDNOTES

1.The *Canadian Environmental Protection Act*, 1988, ss.25-32.

2.See July 1993 Draft Regulations.

3.See, for example, The Regulation of Biotechnology (Toronto: Canadian Environmental Law Research Foundation, 1984), Biotechnology Policy Development (2 Vols.) (Toronto: Canadian Institute for Environmental Law and Policy, 1988).

4.CEPA, s.25(4).

5.Ibid, s.26(3)(a).

6.Ibid, s.26(3)(b) and (c).

7.Ibid, s. 26(3)(d).

8.Ibid., s.26(3)(e).

9.Ibid, s.26(4).

10.Ibid., s.26(5).

11.Ibid, s.32(1)(c).

12.Ibid., s.32(1)(a).

13.Ibid s.32(1)(g).

14.Ibid., s. 28(1).

15.Ibid., s.32(1)(f).

16.Ibid., s.32(2).

17.Ibid., s.28(4).

18.Ibid., s.29.

19.Ibid, s. 29(3).

20.Ibid., s.29(5).

21.Ibid., s.29(2).

22.Ibid., s.29(4).

23.Ibid., s.30.

24.Ibid., s.33(1)

25.Ibid., s.33(3).

26.Ibid., s.34.

27.Ibid., s.34(2).

28.Ibid., s.48.

29.Ibid., s.89(1).

30.Ibid., s.91.

31.Ibid., s.94.

32.Ibid., s.20(1).

33.Ibid., s.20(4).

34.Ibid., 20(2)(f).

35.Ibid., s.20(2).

36.Ibid., s.31.

37.See, for example, Canadian Environmental Protection Act Priority Substances List Assessment Report No. 1: Toluene (Ottawa: Environment Canada, Health and Welfare Canada, 1992).

38.A possible amendment of CEPA s.11 might be to require that a substances be considered "toxic" for the purposes of CEPA if it has any one, or combination of, the following characteristics:

- has or may have an immediate or long-term harmful effect on the environment;
- constitutes or may constitute a danger to the environment on which human life depends; or
- constitutes or may constitute a danger to human life or health.

A supplemental submission to the Standing Committee on Environment and Sustainable Development will be developed by the Canadian Environment Network Toxics Caucus to address this issue in detail.

39.On this issue of the environmental effects of persistent toxic substances see for example, A Prescription for Healthy Great Lakes: Report of the Program for Zero Discharge (Toronto and Ann Arbor: Canadian Institute for Environmental Law and Policy, National Wildlife Federation, 1991), esp.ch.2 and 3.

40.Ibid., ss.26(3)(b), (c), and (d).

41.Ibid., s.29(4).

42.CEPA, s.29(2).

43.*Pest Control Products Regulations*, CRC 1978 c.1253, s.18(b).

44.CEPA, s.26(4)(b)

45.Ibid., ss.29(1) and (3)

46.*An Act Respecting Environmental Rights in Ontario*, S.O. 1993, ch-28, Part IV.

47.CEPA, s.94.

48.P. Finkle, K. Webb, W.T. Standbury, P. Pross, Federal Government Relations with Interest Groups: A Reconsideration (Ottawa: Supply and Services Canada, 1994), esp. ch.9.

49.S.C. 1992, c.37.

50.R.S.O. 1990, c.I.13.

51.See B.Rutherford, CEPA and Economic Instruments (Toronto: Canadian Institute for Environmental Law and Policy, 1994).

52.For a detailed discussion of public access to information issues and CEPA see Ensuring Meaningful Public Involvement in Environmental Protection (Vancouver: West Coast Environmental Law Association, 1994).

53.A number of environmental groups have questioned Environment Canada's interpretation of the law; however, their interpretation of the law carries little weight so long as Environment Canada considers itself bound by its own interpretation. These lawyers unanimously believe that this issue needs to be clarified.

54.See *Rimes v. Club Corporation of America* (Tex. Civ. App.) 542 S.W. 2d 909 at 913.

55.CEPA s.20(1)(f) states that summaries of occupational exposure information may be released despite requests for confidentiality.

56.CEPA s.20(1)(f) only allows releases of summaries of this type of information.

57.Canada's Green Plan: Canada's Green Plan for a Healthy Environment (Ottawa: Supply and Services Canada, 1990), p.50.

58.CEPA, s.3(1). Similarly, a biotechnology product is defined as "a product manufactured through the application of biotechnology" in Part I of the *New Substances Notification Regulations*.

59. Sheldon Krimsky, Regulatory Policies on Biotechnology in Canada (October 1984), at 19.

60.Information supplied to CIELAP by Agriculture and Agri-Food Canada in July 1994 indicates that, for the 1994 growing season, of 881 trials of genetically modified plants for which applications were received, 715 involved modifications for herbicide resistance.

61.Clement International Corporation Issue Paper: Development of Ecological Tier Testing Schemes for Microbial Biotechnology Applications (Washington D.C: United States Environmental Protection Agency, and Environment Canada December 1993), p.22.

62.Ibid., p.19.

63.Ibid.

64.Ibid.

65.National Biotechnology Advisory Committee, *National Biotechnology Business Strategy: Capturing Competitive Advantage for Canada* (Ottawa: Department of Industry, Science and Technology, 1991), p.32.

66.Ernst and Young and the Environmental Bio-Industry Council, A Brief Examination of the Canadian Bioremediation Industry (DRAFT) (Ottawa: Environment Canada, 1994).

67.See generally, L.D. Nickerson, and W.M. Cheliak, Regulating Environmental Releases of Genetically Modified Trees: Scientific, Forestry and Legal Considerations (Ottawa: Science Directorate, Forestry Canada, 1991).

68.See generally, Transgenic (Genetically Modified) Aquatic Organisms: Policy and Guidelines for Research with, or for use in Natural Aquatic Ecosystems in Canada (Draft) (Ottawa: Department of Fisheries and Oceans, 1993).

69.Ecological Society of America, "The Release of Genetically Engineered Organisms into the Environment: A Perspective from the Ecological Society of America," Ecology Vol. 20, No.2, April 1989.

70.U.S. Environmental Protection Agency, Chemical Control Division, Office of Toxic Substances, "Regulation of Genetically Engineered Substances under TSCA," in United States Congress, House of Representatives Committee on Science and Technology, The Environmental Implications of Genetic Engineering (Washington D.C.: U.S. Government Printing Office, 1984), p. 13.

71.Krimsky Regulatory Policies for Biotechnology in Canada, p.16 and M.A.Valiante and P.R.Muldoon, "Biotechnology and the Environment: A Regulatory Proposal," 23 Osgoode Hall Law Journal (Summer 1985), 376.

72.U.S. EPA, "Regulation of Genetically Engineered Substances under TSCA," in United States Congress, House of Representatives Committee on Science and Technology, The Environmental Implications of Genetic Engineering, pp.18-19.

73.J.M. Tiedje, R.K. Colwell, Y.L. Grossman, R.E. Hodson, R.E.Lenki, R.N. Mack, and P.J. Regal, "The Planned Introduction of Genetically Engineered Organisms: Ecological Considerations and Recommendations," Ecology 1989, Vol. 20, No. 2 p. 301. See also E.Smit, J.D. van Elsas, and J.A. van Veen, "Risks Associated with the Application of genetically modified microorganisms in terrestrial ecosystems," FEMS Microbiology Reviews 88 (1992), 263-278, and M.Mellon and J.Rissler, Perils Amid the Promise: The Ecological Risks of Transgenic Crops on a Global Market (Washington, D.C.: Union of Concerned Scientists, 1994).

74. D. Pimentel, M.S. Hunter, J.A. LaGro, R.A. Efroymson, J.C. Landers, F.T. Mervis, C.A. McCarthy, and A.E. Boyd. "Benefits and Risks of Genetic Engineering in Agriculture", Bioscience (1989), Vol.39, No.9, pp.606-614, at 609.

75.Ernst and Young and Bio-Industry Council, A Brief Examination of the Bioremediation Industry p.38.

76.See Muldoon, CEPA, Toxic Substances and Pollution Prevention.

77.*Johanneson v. West St. Paul* (1952), 1 S.C.R. 292.

78.*Re Regulation and Control of Radio Communication* (1932), A.C. 304.

79.*Pronto Uranium Mines v. Ontario Labour Relations Board*(1956), 5 D.L.R.(2d) 342.

80.*Monroe v. National Capital Commission* (1966) S.C.R. 663.

81.See M. Valiante and P. Muldoon, "The Regulation of Biotechnology," (Toronto: Canadian Environmental Law Research Foundation, 1984), pp.49-50.

82.*R. v. Crown Zellerbach*, (1988), p. 438.

83.Ibid.

84.On this test see P.Hogg, The Constitutional Law of Canada (Toronto: Carswell, 1992), s.17.3(c).

85.See, for example, Biotechnology in Ontario - Growing Safely (Toronto: Government of Ontario, 1989). See also the Alberta *Environmental Protection and Enhancement Act*, S.A. 1992, Ch.E-13-3, s.248(2)(x) and Alberta Regulations 110/93 and 242/93 and the Draft *British Columbia Environmental Protection Act*, Part 8 (Biotechnology) (February 1994 Draft).

86.On pesticides regulation, see generally, J.Castrilli, and T. Vigod, "Pesticides," in J. Swaigen, ed., Environment on Trial: A Guide to Ontario Environmental Law and Policy (Toronto: Canadian Institute for Environmental Law and Policy and Emond-Montgomery Publishers, 1994), ch.20.

87.The *Constitution Act*, 1982, s.95.

88.Ibid., s.91(12).

89.Ibid., s.91(2).

90.Ibid., s.91(27). See *Re Canada Metal Co. Ltd., and the Queen*, (1982) D.L.R.(3d) 124 (Man Q.B.) See also K.Clark and B.Rutherford, on constitution.

91.R.Goldburg, J. Rissler, H. Shand, C. Cassebrook, Biotechnology's Bitter Harvest: Herbicide Tolerant Crops and the Threat to Sustainable Agriculture (Washington D.C.: Environmental Defense Fund, National Wildlife Federation, Rural Advancement Fund International, and Centre for Rural Affairs, 1990).

92.B.Mausberg and P. uldoon, "The Regulation of Biotechnology," in Swaigen, ed., Environment on Trial, p 41.

93.See, for example, " Open Letter to the Rt. Hon. J.Chretien Regarding rbST in Canada," August 10, 94. The 50 signatories included the Canadian Institute for Environmental Law an Policy, the Canadian Environmental Law Association, the Canadian Labour Congress, the Canadian Organic Growers, the National Action Committee on the Status of Women, the Humane Society of Canada, the National Farmers' Union, the Rural Advancement Fund International, The Registered Nurses Association of Ontario, he National Anti-Poverty Organization, the Ecumenical Coalition for Social Justice and the Council of Canadians.

94.See, in particular, Standing Committee on Agriculture, rbST in Canada (Ottawa: House of Commons, 1994), Recommendation 7.

95.Resource Futures International, Evaluation of the Canadian Environmental Protection Act (CEPA): Final Report (Ottawa: Environment Canada, December 1993), p.53.

96.RSC.P-10.

97.RSC 1985, c.S-8.

98.RSC 1985, c.F-10.

99.SC 1990, c.22.

100.RSC 1985, c.F-14.

101.Ibid.

102.This would include: strain or variety history; life cycle; requirements for growth, survival and replication; potential for toxic production; specific resistance factors; extra chromosomal genetic elements; potential to transfer genetic material; antibiotic susecptibilty and resistance; and survival, competitive and environmental dispersal characteristics.

103.This might include: potential for consumer or occupational exposure; infectivity, toxicity and pathogenicity on plants, animals, and microorganisms; degradation or other modifications to the structural integrity of target and non-target substances; and effects on the integrity and functions of ecological systems and cycles.

104.This provision is based on *Council Directive of 23 April 1990 on the Deliberate Release into the Environment of Genetically Modified Organisms* (90/220/EEC), Part B, Article 5, s.2(a)(v).

105.See *New Substances Notification Regulations for Biotechnology Products under the Canadian Environmental Protection Act* (July 1993 Draft).

106.See Food Production and Inspection Branch, **Regulatory Proposal:** *Assessment Criteria for Determining Environmental Safety of Genetically Modified Plants* (Ottawa: Agriculture and Agri-Food Canada, June 1994).

107.See "Points to Consider for Microorganism Premanufacturing Notice Submissions under TSCA," (Washington D.C.: Office of Pollution Prevention and Toxics) quoted in Clement International Corporation, Issue Paper, pp.4-12.

108.Government Response to the Report of the Standing Committee on Agriculture and Agri-Food "rbST in Canada" (Ottawa: Government of Canada, August 1994), p.8.

109.*Pest Control Products Regulations*, s.18.

110.R. Northey and J. Swaigen, "Environmental Assessment," in Swaigen, Environment on Trial, pp. 189-191.

111.See, for example, note 90, supra.

112.CEPA s.71(1)(d) provides a model for such public notice requirements.

APPENDIX 4

CEPA AND ECONOMIC INSTRUMENTS

Prepared by:

Barbara Rutherford, B.A., LL.B.
Research Associate

Mark S. Winfield, Ph.D.
Director of Research

Canadian Institute for Environmental Law and Policy
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CEPA AND ECONOMIC INSTRUMENTS

I. INTRODUCTION

As our understanding of the underlying economic and political causes of environmental degradation increases, it has become apparent that it is necessary to expand the range of tools which we employ to protect the integrity of the environment. In this context, "economic" policy instruments, such as the imposition of taxes on environmentally harmful activities, and the creation of markets for permits to emit pollutants, have attracted growing interest over the past few years.[1] This paper will analyze these instruments with respect to their relevance to the Standing Committee on the Environment and Sustainable Development's review of the *Canadian Environmental Protection Act* (CEPA).

Economic instruments have been incorrectly touted both as "voluntary" mechanisms and as enforcement tools.[2] Economic instruments, such as environmental taxes and tradeable permits, are defined, for the purposes of this discussion, as those instruments having the potential to alter behaviour by providing monetary incentives to reduce and/or eliminate the creation and discharge of contaminants. Economic incentives, such as subsidies, can also alter behaviour, yet they do so through encouragement, rather than as a parts of a regulatory system.

There are several critical prerequisites for a successful regulatory regime which includes the use of economic instruments. The first requirement is a discharge monitoring system that allows both the firm and the regulators to measure accurately total discharges and any reduction in discharges for the purposes of approving a trade or levying a tax. Secondly, clearly enforceable environmental quality standards must be established to serve as baselines for a minimum level of environmental quality that have to be met at all times. These points highlight one of the fundamental obstacles to the use of tradeable permits and discharges fees under CEPA: the general paucity of permitting provisions in the Act.

II. INPUT AND OUTPUT FEES AND CHARGES

1) Theoretical Basis

In general the use of fees and charges for environmental purposes can take three forms:

i) charges against a firm based on the amounts of pollutant discharges from the firm to the air, land or water;

ii) charges levied on feedstocks used by a firm in its productive process;

iii) charges levied on final products whose production, use or disposal is associated with high environmental costs.

Levying a fee or tax on emissions, or for the use of particular inputs, provides a disincentive to emit or use the substance being taxed. The theoretical basis for a fee or tax mechanism is that firms will reduce their discharges or use of the targeted substance up to the point where the marginal cost of another unit of reduction equals or exceeds the charge levied by the government. A fee set high enough to encourage the reduction of discharges would act as a catalyst for the implementation of technological changes to prevent the pollution. Similarly, an appropriate level of tax on the use of a substance in production would encourage the development of pollution prevention technologies to eliminate the use of the substance.[3]

2) Use in Canada and Other Industrialized Jurisdictions

Input and output fees are widely employed instruments in the United States and many European jurisdictions. In the U.S., taxes on the use of particular chemical feedstocks are employed to support the federal Superfund program created through the *Comprehensive Environmental Response, Compensation and Liability Act* of 1980, and state superfund, toxic use reduction, and pollution prevention programs, in at least 26 states.[4] Several states also currently charge fees under the *Clean Water Act* permitting system.[5] Within Europe, Germany has developed an extensive system of charges related to discharges to water and the generation of hazardous wastes.[6]

In Canada waste discharge fees are presently levied by the federal government under the ocean dumping control part of CEPA.[7] In addition, fees are levied by British Columbia under its *Waste Management Act*.[8] The Ontario government charges a permit fee for Certificates of Approval issued under the *Environmental Protection Act*. The 1993 report of the Ontario Fair Tax Commission recommended that Ontario establish a system of pollution taxes on the discharge of a range of substances selected from generally recognized pollutants, such as those covered by the National Pollutant Release Inventory.[9]

3) Fees and the Federal Government

Although the Constitution grants the federal government the power to raise revenue by "any mode or system of taxation,"[10] the federal government's capacity to apply charges of this nature is not unlimited. In particular, the federal government cannot use its taxation power to undermine valid provincial regulatory systems, such as permitting systems for discharges into the environment.[11] However, The federal

ment would appear to have the jurisdictional capacity to be secure in applying for the discharge or use of substances which are found to be "toxic" for the poses of CEPA.[12] Other taxes, such as a generic discharge fee, may be constitutionally harder to justify, particularly where such fees interfere with provincial environmental regulatory systems.

Input vs. Output Fees

In addition to their potential to be found constitutionally invalid as a result of interference with provincial regulatory systems, discharge fees suffer from a number of additional disadvantages from a federal perspective. Among the most significant is the absence of a federal permitting system for discharges of pollutants into the environment, except for ocean dumping, for which fees are already charged. Consequently, the federal government does not have information on discharges necessary to set and administer fees readily available. The provinces would have to be asked to provide the necessary data.

Furthermore, although the federal government has authority to impose discharge fees with respect to "toxic" substances, the provinces regard the regulation of specific discharges to the environment as being under their jurisdiction and, as noted earlier, several have already, or are considering, imposing such charges themselves. As a result, federal action in this regard would have the potential to engender significant federal-provincial conflict.[13]

The levying of fees on the use, import, manufacturing, processing or export of "CEPA toxic" substances by the federal government would, on the other hand, be an attractive option for a number of reasons. Such an approach would be highly consistent with the theme of pollution prevention through toxics use reduction, as charges could be employed to discourage the production or use of "toxic" chemicals. In addition, the application of fees on the manufacturing, processing or use of "toxic" substances has a strong appeal as a point of federal intervention, as attempts by provinces to impose such fees would run a very high risk of being characterized as indirect taxation, and therefore constitutionally invalid. Such charges would also be less likely to be construed as interfering with provincial regulatory systems governing discharges into the environment.

4) The Use of Revenues Generated by Charges on "CEPA Toxic" Substances

In the event that the imposition of charges on the use, manufacturing or processing of "CEPA toxic" substances were to be authorized through amendments to CEPA, the question arises as to the use of any funds generated. In this context, the issue of financing the clean-up of contaminated land, where the parties responsible cannot be ascertained, or are impecunious, has been the subject of much debate in Canada. It has

been estimated that there are approximately 10,000 active and inactive waste disposal sites in Canada and another 20,000 that may have been contaminated by underground gasoline storage, industrial operations or accidental spills.[14] What proportion of these are "orphan sites" (meaning that liability cannot be assigned) is unclear.

Under the auspices of the Canadian Council of Ministers of the Environment (CCME), the federal and provincial governments announced a National Contaminated Sites Remediation Program (NCSRP) in October 1989. The program was designed in part to finance the clean-up of orphan sites. Shared provincial and federal funding totalling $200 million was designated over a five year period ending March 31, 1995 for this purpose.

As the original mandate of the NCSRP comes to an end, the federal and provincial governments must examine the choices available for funding future orphan site remediation. The CCME secretariat currently estimates a need for an annual expenditure of $30 to $50 million for the ongoing remediation of orphaned sites for some time to come.[15] Two options for meeting this requirement exist: continued funding out of general revenues; or finding a new source of revenue. The continued use of existing general revenue, given the current fiscal situation of Canadian governments would result in increased levels of public debt, or require the reallocation of funds from other programs. This would also set an undesirable precedent for the socialization of major future environmental liabilities.

The funding of further federal contributions to the NCSRP through the use of the revenues generated by the imposition of charges on the use, manufacturing or processing of "CEPA toxic" substances would avoid these problems. At the same time, such an approach would provide incentives to prevent future pollution through the reduction of the manufacturing and use of toxic substances. Some of the revenues generated by the "CEPA toxic" substance charges could also be employed to support the development and diffusion of skills and technologies in the area of pollution prevention in Canada.

III. TRADEABLE PERMITS

Tradeable permits are another economic instrument that can be used in conjunction with traditional command and control regulation to promote pollution prevention. However, these instruments suffer from a number of serious problems in terms of the practicality of their implementation by the federal government.

1) Theoretical Basis

In an emission trading system, the government would determine what level of pollution is allowed and then allocate the permission to discharge this pollution amongst regulated firms through units such as "permits," "credits," or "allowances." A firm may not exceed its permitted level of emissions. However, if a firm is able to reduce its emissions below its permitted level, it can sell the reduction to another firm, so that firm can increase its emissions. A firm can also save its emission reduction credits for future use.

In order to effect the economic gains from the creation of a market, there must be competition.[16] This means many buyers and sellers are needed so that one seller or buyer cannot affect the price of the permits. Second, transaction costs should be kept to a minimum so that trading can be as smooth as possible.[17]

Neoclassical economic theory posits that, under these circumstances, tradeable permits will net a guaranteed level of environmental quality at the least cost to the regulated community. In practice, however, for reasons outlined in the following discussion, these theoretical efficiency gains may not adequately compensate for the increased administrative costs of a tradeable permits system properly designed would ensure improvements in environmental quality.

2) Rights to Pollute?

One of the major concerns which have been identified regarding emissions trading systems is their underlying assumption that market mechanisms, particularly the establishment of proprietary rights to use environmental resources, must be extended to the environment in order to protect it from abuse.[18] Trading systems have, consequently, been criticized as a form of "privatization" of the environment.

This objection is more than theoretical. If permits were interpreted as creating property rights to pollute, the result could be tremendous regulatory problems for governments in the form of legal challenges to changes in the permit systems, as well as the potential for the requirement of compensation for the revocation of permits. In order to forestall this problem, any permit system must be enacted with the proviso that the permits are licenses revocable at the pleasure of the Crown.

3) Experience in Other Industrialized Jurisdictions

Tradeable permits have only been used in the United States. The phase down of lead in gasoline was, for example, implemented through an allowance trading system. In addition, air emissions trading has been part of the U.S. regulatory regime since the mid-1970s under the *Clean Air Act*. Recent amendments to this Act created a new

trading system for sulphur dioxide (SO2) emissions from utility plants.[19]

4) System Requirements

The U.S. experiences offer important lessons about the minimum regulatory framework necessary for an environmentally effective tradeable permits system. First, the emissions being traded must be easily measurable and there must be a measurement system in place that is accurate and reliable. The acid rain trading program involves a finite number of utilities which emit measurable levels of SO2 from their smokestacks. A continuous emissions monitoring system has been developed, which it is claimed can track emissions with a high degree of precision.[20] It has been stated that "without this continuous monitoring technology, the program would fail."[21]

5) The Problem of "Local Loading"

A further major problem which has been identified regarding trading programs is their the potential to cause a phenomenon called "local loading." Under perfect free market conditions, build up of localized pollutants could occur based upon the different marginal costs of compliance faced by each firm. The U.S. acid rain program is designed to avoid this problem by mandating health-based ambient SO2 standards which prevent any one utility from emitting unhealthy levels of SO2. However, this control mechanism would not work with pollutants that have strong localized effects, such as toxic substances. Consequently, such substances are generally not regarded as suitable subjects for emissions trading programs.[22]

6) The Allocation of Permits

The initial allocation of tradeable permits is very important from a number of perspectives. If the total amount of emissions permitted is too high, the environmental quality will suffer as a result. In order to encourage pollution prevention, the total emissions permitted should be set at a decreasing rate over time. The U.S. acid rain program, for example, involves a lowered cap on total SO2 emissions each year. This is intended to ensure actual reductions in acid rain.

The creation of a market also has important distributional effects. By allocating to firms the right to emit x tons of a pollutant, the government is creating wealth and distributing it to the firms. The initial allocation, if based upon current emissions, will create a bias towards polluting industries[23], as they would be provided them with a windfall on the basis of their present pollution prevention efforts.

In order to be compatible with a pollution prevention approach, the initial allocation,

if based upon historic emissions, should be less than the historic emissions levels,[24] as well as being based upon standards achievable through best available control technology. Actual permitted emissions under the trading scheme should then result in an improvement of the environmental quality. At the very least legislation would have to specifically provide that the total amounts permitted under the initial allocation can be no greater than amounts estimated to be released from affected sources under existing legislation.[25]

Enabling legislation would also have to provide for reductions in the levels of emissions allowed by each permit, so that new sources can purchase emission permits through auctions without increasing the total loading. Revenues generated through the auction process could be allocated to the government agency to pay for the administration of the permit system. This system for the subsequent allocation of permits would be consistent with the "polluter pays"[26] principle. In addition, an auction system would help to combat strategic behaviour on behalf of firms who might be inclined to hoard permits to exclude competitors from the market.[27] Auctions could also conceivably act as an incentive for strict enforcement if governments depend on the revenue generated.[28]

7) Emission Reduction Credits

Emission reduction credits and allowing opting-in of new sources are additional means of allocating tradeable permits. Emission credits could be allotted on the basis of reductions from sources with existing permits and sources that do not have tradeable permits.[29] Even though it is important from the economic efficiency perspective to encourage as many firms to participate as possible in the tradeable permitting program, allowing such opting-in and other reduction credits may present a large challenge to the ability of a tradeable permits system to prevent pollution.

This possibility is a result of the consideration that without continuous monitoring technology, in practice it will be very difficult to measure actual emissions. It will obviously be to the advantage of firms to overestimate their emissions initially and to overestimate their reductions as this overestimation can translate into monetary gains. Thus, the creation of a tradeable permits system, based upon estimations of emissions could easily result in a total increase in pollutants to the environment. In the context of the U.S. emission reductions program, for example, credit was given for a 20% reduction in emissions which was later determined to have actually resulted in a 36% increase in emissions.[30] Other problems with such reduction credits arise where sources receive credit for reductions that would have occurred in any event.[31]

It should be noted that emissions reduction credits are one of the major sources of criticism regarding tradeable permits systems. There has been considerable litigation in the U.S. concerning whether credits given for reductions already achieved, or for

reductions that would have been achieved through compliance with the pre-existing law, are contrary to the intent of Congress.[32]

8) Administration and Enforcement

From the perspective of economic efficiency, the administrative oversight of a tradeable permits system should be minimal so as to allow trading without significant transaction costs. The lead trading program in the United States involved self-monitoring and reporting by gasoline refineries, with little oversight by the U.S. Environmental Protection Agency.[33] The manageable number of large utilities subject to the acid rain trading program was intended to ensure that administrative oversight would not create significant transaction costs. However, there is growing evidence that even this simple program has resulted in a significant and complex administrative burden. The administrative oversight of a volatile organic compound (VOC) trading system or an allowance trading system for hazardous waste generators would be even more cumbersome, given the number of sources involved.[34]

This is a serious problem, as effective monitoring and enforcement systems are absolutely essential to the success of any program. Continuous monitoring systems could be prohibitively expensive in some cases and the aforementioned monetary incentive to cheat would be enhanced if enforcement efforts were widely known by the regulated community to be lax.[35] The self-reporting of emissions data is especially open to potential abuse given these factors.[36]

Given the financial incentive to sell as many units of emissions as possible, firms are likely to emit very close to their legal allotments, meaning there will be an increased need for inspection. There must be a real deterrent against permit violations in the form of a high probability that offenders will be caught and prosecuted.[37]

In general, the necessary level of regulatory oversight, such as pre-approval of trades and frequent inspections, and the necessity of continuous monitoring systems, may make a tradeable permits system unwieldy and expensive to operate. Indeed, as the West Cost Environmental Law Research Foundation (WCELRF) has noted, the necessity for restrictions on trading and other regulatory oversight mechanisms may greatly reduce the alleged cost-effectiveness of such systems over traditional regulatory models.[38] These considerations are of particular concern given Environment Canada's limited experience in regulatory program administration and enforcement.[39]

9) What would be Traded under CEPA?

Finally, it is difficult to envision a tradeable permits regime given the federal government's lack of permitting powers under CEPA. Given the nature of the "local

loading" problem, it would seem imprudent to allow trading of ocean dumping permits. The same concerns apply to the trading of "CEPA toxic" substances.

Tradeable air permits are the other possibility. However, the federal government shares jurisdiction over air pollution with the provinces. A trading regime is not the only way in which air toxics might be dealt with. It is therefore unlikely that the federal government would be able to rely on its general power to implement trading regulations. Rather, a level of federal-provincial cooperation, hitherto unknown in the environmental field,[40] would be required to implement such a system on a national basis.

IV. CONCLUSIONS AND RECOMMENDATIONS

1) General

Economic instruments can be used to supplement traditional regulatory systems. They cannot, however, replace such systems. Rather, the effective application of economic instruments requires the existence of enforceable environmental quality standards which serve as baselines for a minimum level of environmental quality that must be met in all cases.

Furthermore, it is essential, that economic instruments be designed very carefully to promote pollution prevention. Instruments of this nature must be supported by detailed enactments, which clearly establish all of the necessary aspects of the system.[41] This would be especially important in the case of tradeable permit systems. Adequate provisions for monitoring and enforcement are essential.

2) Emissions Trading

Experience with emission trading systems is extremely limited and their effectiveness is a matter of considerable arguement. The practicality of implementing such systems successfully is a matter open to serious question. Trading systems require extensive and complex administrative, monitoring and enforcement structures, and their potential environmental and economic effectiveness, even when such mechanisms are in place, is the subject of continuing debate.

In the context of CEPA, the dearth of permitting provisions under the Act presents a major problem in the design and implementation of a trading system at the federal level. To what federal permission would the tradeable permits attach? In light of the problems surrounding the use of tradeable permit regimes, particularly with respect to "local loading" effects, the authorization of the trading of ocean dumping permits, the only formal approval presently granted under CEPA, cannot be recommended.

The problem of "local loading" and numbers of potential sources of emissions also render trading systems inappropriate for the management substances considered "toxic" for the purposes of CEPA. The maintenance of the integrity of the environment should not be placed at risk to the pursuit of theoretical promises of economic efficiency.

There is, theoretically, a potential federal role in management of a trading system regarding non-"toxic" air emissions which permits interprovincial trades. However, in addition to overcoming the extensive administrative, enforcement, monitoring and distributive problems associated with trading systems, the federal and provincial governments would be required to work together in a manner unprecedented in the Canadian environmental policy experience in order to establish such a system. Legislative provisions to implement a system of this nature could not be considered until a complete system design, acceptable to all stakeholders, was developed.

RECOMMENDATION:

CEPA should **not** *be amended to permit the trading of ocean dumping permits or emission trading involving substances considered "toxic" for the purposes of CEPA.*

3) Fees and Charges

The imposition of discharge fees under CEPA may present a number of problems, especially in relation to the absence of federal discharge permitting systems, except for ocean dumping, and the potential of federal discharge fees to interfere with provincial environmental permitting systems. Charges levied on the manufacture, use, or processing of "toxic" substances would avoid the possibility of interference with provincial jurisdiction, and provide incentives to reduce the manufacturing or use of such substances.

RECOMMENDATIONS:

Section 34 of CEPA should be amended to permit imposition of charges on use, processing, manufacturing, sale, import, or export of a "toxic" substance or products containing a "toxic" substance.

Revenues raised from such charges should be employed to finance federal contributions to the National Contaminated Sites Rehabilitation Program. Revenues might also be used to support the development and diffusion of skills and technologies related to pollution prevention within Canada.

ENDNOTES

1.See for example, Economic Instruments for Environmental Protection (Ottawa: Environment Canada, 1992).

2. Fines levied under administrative penalties, such as ticketing under s.134 of CEPA, or levied by a court upon conviction are part of an enforcement strategy. We distinguish economic instruments from these monetary penalties.

3.For a more detailed discussion of the use of environmental taxes and charges 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 Ltd. and the Canadian Institute for Environmental Law and Policy, 1993), pp.xxx-xxxi.

4. Glenna Ford, Doug MacDonald and Mark Winfield, "Who Pays for Past Sins? Policy Issues Surrounding Contaminated Site Remediation in Canada," Alternatives, Vol. 20, No.4, October 1994, pp.28-34.

5. Environmental Law Institute (ELI), The Tools of Prevention: Opportunities for Promoting Pollution Prevention Under federal Legislation (Washington, D.C.: ELI April 1993), p.23

6.The Application of Economic Instruments for Environmental Protection (Paris: Organization for Economic Cooperation and Development, 1989), p.43.

7.CEPA, Part VI.

8.*Waste Management Fees Regulation*, B.C. Reg. 299-92.

9.Ontario Fair Tax Commission, Fair Taxation in a Changing World (Toronto: University of Toronto Press, 1993), p.559.

10.The *Constitution Act*, 1982, s.91(3).

11.L.Nowlan and C.Rolfe, Economic Instruments and the Environmental Protection: Selected Legal Issues (Vancouver: West Coast Environmental Law Research Foundation) 1993), pp.25-26; citing *Re: Agricultural Products Marketing Act* [1978] 2 S.C.R. 1198 and *Re: Employment and Social Insurance Act* [1936] S.C.R. 427.

12.For a more detailed discussion of these issues, see Nowlan and Rolfe, Economic Instruments and the Environment.

13.It should be noted that provincial authority to impose such charges beyond administrative costs is an increasingly open question in light of recent jurisprudence. It has been suggested that such charges are a form of indirect taxation. See, for example, *Re Allard Contractors Ltd. and District of Coquitlam and four other applications* (S.C.C.), 109 D.L.R. (4th) 46. See also G.V. La Forest, The Allocation of Taxing Power Under the Canadian Constitution (2nd ed., 1981), pp.162-165.

14. Ned Lynch, National Contaminated Sites Remediation Program (Ottawa: Environment Canada, October 1991); William M. Glenn, et al., Toxic Real Estate Manual (Toronto: Corpus Information Services, 1988), p.4 speculates that there may be "...30,000 industrial sites...that are potentially contaminated with toxic material."

15. InterGroup Consultants Ltd., Sharing the Unfairness (Toronto: Canadian Council of Ministers of the Environment, background paper prepared for CCME Contaminated Site Liability Task Force Orphan Site Funding Workshop, January 1994.

16. Over time there is a tendency for market concentration to occur. See H.Daly and J.Cobb, For the Common Good (Boston: Beacon Press, 1989) p.49.

17. Transaction costs diminish the economic benefits of a trading scheme. In addition, the application of the Coase Theorem is relevant here. This theorem holds that where transaction costs are not negligible, the initial allocation of the right is a critical consideration, as whoever "owns" the right does not have to pay the transaction costs, and without transaction costs, the initial allocation is theoretically irrelevant.

18.Heidenreich and Winfield, "Sustainable Development, Public Policy and the Law," pp.xxxiii-xxxiv.

19.*Clean Air Act Amendments* of 1990, Title IV, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

20.Concerns have been expressed regarding the reliability of this system. D.Doniger, Counsel, Natural Resources Defense Council, "Remarks Regarding the *Clean Air Act* SO2 Trading System," to Ontario Ministry of Environment workshop on Economic Instruments and the Environment, September 1992.

21. ELI, The Tools, p.25.

22. Ibid.

23. This would be the result of the recommendation in Discussion Paper on Emission Trading by the Working Group of the Canadian Ministers of the Environment, to allocate emissions on the basis of average emissions in recent years. Although the CCME Working Group recognizes the unfairness of rewarding firms who have lagged behind in pollution prevention, their solution of reducing allocation rights faster for those firms does not completely remove this inequality. The West Coast Environmental Law Research Foundation (WCELRF) recommends that firms out of compliance with standards achievable with best available control technology, be required to attain those emissions levels within 5 years.

24. This is the allocation system used under the U.S. 24. *Clean Air Act* sulphur dioxide emissions trading program for utilities.

25.Nowlan and Rolfe, Economic Instruments and the Environment, p.112.

26. This principle was first articulated by the Organization for Economic Cooperation and Development (OECD) in 1972; see OECD, "Guiding Principles Concerning International Economic Aspects of Environmental Policies," Council Recommendation C(72)128 (May 26, 1972).

27. However, combatting strategic behaviour would also require that the enabling legislation authorize the regulators to refuse sales to the highest bidder where there are reasonable grounds to believe that the bidder intends to use the permits for the purpose of excluding competitors from the market. The power to refuse such sales should be supported by the power to compel bidders to provide information as to their abatement costs. It may be prudent to require demonstration that marginal abatement costs exceed the price of the permit as a precondition of approval of purchases. Nowlan and Rolfe, Economic Instruments, p.115.

28.Nowlan and Rolfe, Economic Instruments, p.115. Concerns have been expressed that it is highly unlikely that the cost of a permit will accurately reflect the externalized cost of the harm done by the emissions. There are also concerns that the ability of community groups to purchase permits on the market to reduce pollution is significantly limited, given their relative lack of resources, compared to firms that would likely receive tax deductions for their purchases.

29. The U.S. EPA's emission reduction credits policy has four elements; offsets, netting, bubbles and banking. A full description of these elements is contained in Robert W. Hahn & Gordon L. Hester, "Marketable Permits: Lessons for Theory and Practice," 16, Ecology Law Quarterly, (1989) pp.370-375.

30. Richard Liroff, Reforming Air Pollution Regulation: The Toil and Trouble of EPA's Bubble (Washington, D.C.: Conservation Foundation, 1986) pp. 91- 97.

31. See David Hawkins, "Providing Economic Incentives in Economic Regulation," (1991) 8 Yale Journal of Regulation, p.463.

32.Nowlan and Rolfe, Economic Instruments and the Environment, p.121; see also "New York Sues to Limit Acid Rain Trading; EDF Suit Seeks to Close Credit Loophole" (March 19, 1993) Environment Reporter.

33. The minimal oversight is said to have played a significant role in the program's success. Hahn & Hester, "Marketable Permits: Lessons for Theory and Practice."

34. ELI, The Tools, p.25. ELI also notes, in footnote 102, the strong public opposition to the idea of allowance trading among hazardous waste generators, primarily due to the administrative oversight which would be required under such a scheme.

35. Arguably, that is the case presently under CEPA and other federal environmental statutes.

36. Fraud can occur in-house at the firm level and by laboratories hired to conduct such measurements. See United States General Accounting Office, Environmental Enforcement: EPA Cannot Ensure the Accuracy of Self-Reported Compliance Monitoring Data (Washington, D.C.: GAO/RCED, March 1993) at 21, 51, and 55-57.

37.Nowlan and Rolfe, Economic Instruments and the Environment, p.128, citing Barakat & Chamberlain, Study of Atmospheric Emission Trading Programs in the United states: Final Report (Winnipeg: Canadian Council of Ministers of the Environment, 1991) at G-14 and E.Rehbinder and R-U Sprenger, The Emissions Trading Policy in the United States of America: A Evaluation of it Advantages and Disadvantages and Analysis of its Applicability to the Federal Republic of Germany (Washington D.C.: Environmental Protection Agency, 1985)p.193.

38. Nowlan and Rolfe, Economic Instruments, p.103.

39.See generally K.Clark and B.Rutherford, "CEPA and Environmental Law Enforcement" in M.Winfield, ed., Reforming CEPA: A Submission to the House of Commons Standing Committee on Environment and Sustainable Development (Toronto: Canadian Institute for Environmental Law and Policy, 1994)

40.See generally K. Clark and B.Rutherford, "The Constitution, Federal-Provincial Relations, Harmonization and CEPA," in Winfield, ed., Reforming CEPA.

41.It should be noted that the U.S. *Clean Air Act* provisions for trading SO2 and nitrous oxides, Title IV, are 40 pages long.

APPENDIX 5

CEPA AND THE FEDERAL HOUSE IN ORDER:
Reforming the Federal Government's Environmental Performance

Prepared by:

Kenneth Fisher, LL.B.
Research Assistant

Canadian Institute for Environmental Law and Policy
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CEPA AND THE FEDERAL HOUSE IN ORDER:
Reforming the Federal Government's Environmental Performance

I. INTRODUCTION

The following brief examines the House in Order provisions in the *Canadian Environmental Protection Act* (CEPA) and provides some analysis of the issues and problems with the provisions in their current form. In addition to examining the relevant sections of CEPA, we have made reference to the following material:

1. Reviewing CEPA: An Overview of the Issues ("Reviewing CEPA")

2. Evaluation of the Canadian Environmental Protection Act - Final Report (The "RFI Report")

3. CEPA Review Workshop (Nov. 23-24, 1994) - Federal House in Order Discussion Paper - CEPA Review Issue Analysis (The "Discussion Paper")

The first source is an examination of the CEPA House in Order provisions by Environment Canada. The second source is a report submitted to Environment Canada by Resource Futures International (RFI). The third source is a discussion paper sponsored by Environment Canada which contains suggested changes to some of the House in Order provisions. These three sources are useful in understanding some of the issues and problems in the House in Order provisions of CEPA (Part IV - sections 52-60).

II. THE CANADIAN ENVIRONMENTAL PROTECTION ACT

CEPA was proclaimed in 1988 and is a cornerstone of federal environmental legislation. CEPA was enacted to improve legislation protecting the environment. The federal government passed CEPA in response to an array of environmental problems, particularly the control of toxic substances.[1]

III. CEPA'S FEDERAL HOUSE IN ORDER PROVISIONS

1. Introduction

It is well known that the activities of the federal government have a significant impact on the environment. In the Green Plan, the government stated that:

"Federal operations must be exemplary in meeting and frequently exceeding all regulations and standards ... "[2]

Federal works and activities are subject to all federal legislation, including CEPA. However, such works and activities are *not* subject to provincial legislation. Part IV of CEPA is intended to fill this gap by ensuring that federal activities (as defined in sec. 52) which are subject to provincial legislation only, and would otherwise be exempt since there is no comparable federal legislation, will meet adequate environmental standards. Examples of items regulated by provincial legislation only, and thus not covered by federal legislation) include discharge and storage of wastes.[3]

2. CEPA Section 54

The House in Order provisions of CEPA (Part IV) are contained in sections 52-60. Part IV "gives the Minister of the Environment ["the Minister"] the authority to regulate waste handling and disposal practices, as well as emissions and effluent of federal departments and agencies and Crown corporations. In addition, Part IV gives the Minister the authority to make regulations and guidelines that apply to federal lands, works and undertakings when no other act of Parliament applies."[4] This authority is vested in the Minister under sections 53 and 54.

Under s. 54, the ability of the Minister to enact regulations governing the activities of federal departments is severely restricted. Section 54 states that regulations can only be enacted if there is no other federal legislation which provides for regulations to protect the environment which apply to federal works, undertakings or lands. This provision thus has the curious effect of preventing any improvements to federal legislation dealing with the environment through CEPA, since the House in Order provisions are valid only in cases where no federal legislation exists.

If there is no legislation concerning the environmental impact of federal activities, s. 54 will apply. However, the section continues by stating that the Minister may *recommend* to cabinet that regulations be enacted *only after the Minister has obtained the concurrence of the department whose activities are the subject of the proposed regulations* before such regulations can be enacted. It is highly unlikely that a Minister of a particular department would grant permission to the Minister to enact regulations against that department. The result is that the Minister cannot recommend regulations to cabinet without the permission of the department which stands to be regulated. Such a restriction has proven to be a severe impediment to effective regulation of federal activities on the environment. To date, Part IV regulations are in place only for the treatment and destruction of PCB wastes.[5]

3. Obtaining Compliance - Regulatory or Voluntary Approach?

One of the disturbing aspects of the RFI Report is its finding that

> "Since the proclamation of CEPA, there has been a marked shift in emphasis in the implementation of Part IV away from regulation towards voluntary approaches ..." [6]

As part of the Green Plan, the government has undertaken several non-regulatory initiatives designed to improve its environmental record. The RFI Report notes that these initiatives need to be evaluated together with Part IV of CEPA since they are "mutually reinforcing and are sometimes used as alternatives to each other".[7] These supporting initiatives beyond Part IV of CEPA include:

- Code of Environmental Stewardship (Federal Government)
- Office of Environmental Stewardship (Federal Government)
- Environmental Accountability Partnership (Environment Canada)[8]

The RFI report discusses these initiatives in some detail, noting that the Code of Environmental Stewardship "merely sets the *principles* by which the government is to manage its internal operations." [emphasis added] [9] There are no formal sanctions in place in the event that a department does not meet the requirements of the Code.

Clearly, Part IV or any other initiative cannot be effective if no mechanism is in place to ensure compliance. Lack of compliance is perhaps the most serious defect with Part IV in its current form, particularly s. 54. Environment Canada recognizes the difficulty of monitoring government activities through voluntary compliance, although it is somewhat enthusiastic about the progress made to date:

> "As indicated in the Stewardship annual report, departments are making progress in responsible environmental stewardship, although it may not be as fast or as comprehensive as might be wished."[10]

IV. REVIEWING THE RECORD - AN ENVIRONMENTAL FAILURE

The RFI report states that the federal government has failed in its declared goal of demonstrating leadership in the field of environmental protection. The government has failed to make implementation of Part IV of CEPA a high priority, and has relied mostly on a voluntary approach to compliance.[11] The RFI Report then quotes Diane Saxe, a prominent environmental lawyer, in a sharply-worded attack on the lack of action by the government to adequately address the impact of its operations on the environment:

"Although these gaps have been frequently brought to the attention of federal officials, little has been done. Part IV of the Canadian Environmental Protection Act ... purports to authorize the necessary regulations, ... Not only has the federal government failed to bring in adequate measures of its own, it has also refused to comply with provincial measures. ..."[12]

The RFI Report concludes with the following comment regarding government's environmental housekeeping efforts:

"The low priority assigned to controlling the environmental effects of federal government activities represents a significant failure of political will and has important consequences for environmental protection in Canada. ... the current combination of low resources, inadequate legal drafting, minimum political will and almost no regulations is ineffective and must be changed."[13]

The government has not disputed the points stated in the RFI report, and admits that "To date, very little has been accomplished in implementing Part IV of CEPA."[14] Clearly, Part IV has been ineffective and must be amended if the government is to adequately control the effects of its activities on the environment.

V. ENVIRONMENT CANADA'S PROPOSED AMENDMENTS TO PART IV

1. The Three-Pronged Approach

Environment Canada's Federal House in Order Discussion Paper regarding CEPA recommends a three pronged approach which would eliminate sections 53 and 54 of CEPA and replace them with sections which would strengthen the role of the Minister of Environment. The Discussion Paper, which was written by Environment Canada, provides the following description of the proposed amendments which would give the Minister the following powers:

1. Ability to make regulations pertaining to federal real property and operations related to any environmental issue with *the concurrence of the Ministers of the departments to which it applies*. [emphasis added]

2. Ability to selectively adopt provincial regulations, by reference, thereby making them federal regulations for federal facilities in that province.

3. Ability to issue codes and best practices guides to give discretionary direction to departments and assist them with their responsibilities related to environmental stewardship, pollution prevention and environmental emergencies.[15]

The Discussion Paper does not provide the actual wording which the new sections would have, but goes into some detail about problems under the current wording of Part IV and how the three-pronged approach would enable the government to do a better job of regulating the impact of its activities on the environment.

This proposal does not appear to adequately address the problems with the House in Order provisions in their current form. In point #1 of the three-pronged approach, the ability of the Minister to make regulations regarding federal activities remains contingent on the concurrence of the departments engaged in these activities. As discussed earlier, this is a severe restriction on the power of the Minister to enact regulations under Part IV of CEPA.

Point #3 refers to "codes" and "best practice guides" - the problem of lack of enforcement under a voluntary system has not been addressed. Environment Canada admits that the federal departments "would prefer more emphasis on the more voluntary Stewardship approach rather than either provincial or federal legislation."[16] Finally, the suggestion in point #2 that provincial regulations be adopted by reference into federal legislation may be problematic from a legal standpoint - this suggestion would have to be carefully scrutinized to verify that it is legally valid.

The Discussion Paper summarizes several possible approaches to improving Part IV, and provides the "pros" and "cons" of each approach.[17] A review of the Discussion Paper indicates that Environment Canada appears to favour the three-pronged approach.

VI. CONCLUSIONS AND RECOMMENDATIONS

The activities of the Federal government have a profound impact on the environment. The legislative provisions which are meant to deal with this issue are sections 52-60 of CEPA (Part IV). It is clear from the RFI Report, which is very critical of the performance of the federal government as well as from publications put out by Environment Canada that the House in Order provisions in CEPA have been ineffective and that the government has failed to fulfil its mandate of adequately protecting the environment from its activities.

The government has undertaken other initiatives in addition to Part IV to protect the environment, and these programs should be examined in the evaluation of the impact of federal government activities on the environment. One of the major flaws with Part IV of CEPA is its *voluntary* nature - federal departments must give their consent before regulations which will affect them can be enacted under CEPA. As a result, the Minister of Environment has made very few regulations under Part IV.

The sources examined in this brief are useful in analyzing the problems with and possible amendments to Part IV. The RFI Report is sharply critical of how the

government has dealt with the House in Order issue, and the Reviewing CEPA: A Overview, written by Environment Canada, admits to serious difficulties with Part IV. The Discussion Paper of Environment Canada reviews the problems with Part IV in its present form and details a three-pronged approach which it feels is the most practical and effective to improving the House in Order provisions of CEPA. Our proposal is more far-reaching than the three-pronged approach and gives the Minster of the Environment much greater power to regulate the impact of federal department activities on the environment.

Clearly there are severe problems with Part IV of CEPA - there is a pressing need to amend these sections of CEPA and to ensure that compliance with CEPA by federal departments is *mandatory*. It is hoped that the government's re-evaluation of CEPA in the months to come will result in substantial and meaningful amendments to the Act. In this context we make the following proposals.

Recommendations

1) *CEPA should be amended to permit, on the recommendation of the Minister of the Environment, the Governor in Council to make regulations for the purpose of the protection of the environment with respect to federal works, undertakings or lands. Such regulations would take precedence over any other regulations resulting in environmental protection applying to federal works, undertakings or lands made under any other Act of Parliament.*

2) *CEPA should be amended to permit, on recommendation of the federal Minister of the Environment, the Governor in Council to make regulations for the protection of the environment with respect to the activities and operations of federal departments, boards, agencies and, where appropriate, corporations named in Schedule III of the Financial Administration Act.*

3) *The Minister of the Environment should be permitted to make "Environmental Protection Orders" for the purpose of protection of the environment with respect to federal works, undertakings or lands, and with respect to the activities and operations of federal departments, boards, agencies and Financial Administration Act Schedule III corporations in the absence of regulations made for this purpose by the Governor in Council. Such orders should be legally binding instruments.*

4) *CEPA should be amended to require that each federal department, board, agency and Financial Administration Act Schedule III Crown corporation develop an environmental management plan. Initial plans should be required to be in place within one year of the coming into force of the amendments to CEPA. CEPA should also require that, once in place, Environmental Management Plans be reviewed publicly every four years.*

Each Environmental Management Plan would outline:

* *The key environmental issues facing the department, board, agency or corporation in its operations and activities; and*

* *an implementation plan to ensure that in its operations and activities the department, board, agency or corporation:*
  - *practices and promotes pollution prevention through the reduction and elimination of the use, generation or release of pollutants into the environment;*
  - *practices and promotes natural resource conservation through energy efficiency, water efficiency and waste reduction, reuse, recycling and composting;*
  - *protects and enhances biodiversity;*
  - *promotes the conservation, protection and enhancement of ecosystem integrity; and*
  - *protects environmentally sensitive areas;*

The adequacy of Environmental Management Plans and compliance with requirements could be regularly reviewed and reported upon by the proposed federal Environmental Commissioner.[18]

Under CIELAP's proposals, the status of CEPA as the paramount federal environmental protection statute would be affirmed and strengthened. The Minister of the Environment would be granted the power to enact regulations to ensure that the environment is protected in the conduct of activities under federal jurisdiction, and each federal agency would be required to incorporate environmental considerations into its internal management and operational practices. These would be important steps in ensuring that the federal government leads by example through the sound environmental management of its own affairs.

ENDNOTES

1. Environment Canada, Reviewing CEPA: An Overview of the Issues (Ottawa: Environment Canada, 1994), p.1

2. Resource Futures International, Evaluation of the Canadian Environmental Protection Act - Final Report (Ottawa: Environment Canada December 1993), p.107

3. Ibid., p.107

4. Ibid., p.107

5. Ibid., p.108

6. Ibid., p.110

7.Ibid.

8.These initiatives are discussed in the RFI Evaluating CEPA report at pages 108-109, and in Environment Canada, Reviewing CEPA: An Overview at page 12.

9. RFI, Evaluation of the Canadian Environmental Protection Act, p.110.

10. Environment Canada, Reviewing CEPA: An Overview of the Issues, p.12

11. RFI, Evaluation of the Canadian Environmental Protection Act, p.111

12. Ibid., p.112

13. Ibid., p.113

14. Environment Canada, Reviewing CEPA: An Overview of the Issues, p. 13.

15. Environment Canada, Environment Protection Service, CEPA Review Workshop, Federal House in Order Discussion Paper - CEPA Review Issue Analysis, (Ottawa: Environment Canada, October 1993) p.1

16. Ibid., p.3

17. Ibid., pp.7-9

18.Standing Committee on Environment and Sustainable Development The Commissioner of the Environment and Sustainable Development (Ottawa: House of Commons, May 1994).

Appendix H

A Response to Pollution Prevention:
Towards a Federal Strategy for
Action Consultation Document

Submitted to Environment Canada

RESPONSE TO

POLLUTION PREVENTION: TOWARDS A FEDERAL STRATEGY FOR ACTION

CONSULTATION DOCUMENT

SUBMITTED TO
ENVIRONMENT CANADA

SUBMITTED BY
Canadian Labour Congress
Canadian Environmental Law Association
Canadian Institute for Environmental Law and Policy
Centre Quebecois du Droit de L'Environment
Conservation Council of New Brunswick
Environmental Coalition of Prince Edward Island
Great Lakes United
La Societé pour Vaincre la Pollution
Pollution Probe
World Wildlife Fund Canada
Women's Network on Health and Environment

May 3, 1995

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1. Introduction

Pollution prevention is one of the most important concepts to protect the Canadian environment. The concept has been continually proposed and supported by the environmental community. Most recently, support for the concept can be found in the submissions to Environment Canada on the proposed Toxic Substances Management Plan (TSMP)[1] and to the Standing Committee on Environment and Sustainable Development on the Parliamentary Review of the Canadian Environmental Protection Act.[2]

Indeed, it should be noted that the withdrawal of the environmental and labour groups from the Accelerated Reduction/Elimination of Toxics (ARET) was premised, in part, on the lack of a pollution prevention approach in that initiative. Further, environmental groups contributed to an in-depth analysis of the issue in the report of the Pollution Prevention Legislative Task Force which was released in September of 1993.[3]

It is for these reasons that the document, Pollution Prevention: Towards a Federal Strategy for Action[4] [hereinafter referred to the "proposed strategy"] released for public comment in March of 1995, was greeted with anticipation and high expectations. The purpose of this submission is to provide comments on the proposed strategy. For the sake of convenience, this submission will not repeat much of the information outlined in the previous submissions on the topic of pollution prevention. Instead, references will be made to those submissions.

2. Overall Position with Respect to Consultation Policy

The proposed strategy is one that will clearly move pollution prevention forward in Canada. Hence, while there are a number of improvements and clarifications that should be made, it is imperative that this document be accepted and a process put in place to implement it. The support for this document should be taken in light of recommendations that would serve to improve it and guide its implementation.

> **RECOMMENDATION No. 1 - The federal initiative, Pollution Prevention: Towards a Federal Strategy for Action, should be accepted and an implementation strategy established as soon as possible.**

3. The Definition of Pollution Prevention

3.1 Support for the Basic Definition

The definition of "pollution prevention" in the proposed strategy is given as follows:

> The use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants and waste; without shifting or creating new

risks to human health or the environment.

This definition deserves strong support. Its sole focus on prevention, rather than control, is laudable and necessary. In our view, this definition will have a dramatic, positive influence on the development of strategies to address polluting activities. It will promote new technological innovation, generate considerable savings for Canadian industry and provide short- and long-term benefits to the health of Canadians, the work place and the external environment.

Environmentalists have long supported definitions similar to the proposed definition. A full discussion with respect to the benefits and rationale for this definition can be found in both the report of the Pollution Prevention Legislative Task Force[5] and submissions to the Standing Committee on Environment and Sustainable Development for the purposes of the Canadian Environmental Protection Act review.[6]

There are a number of the jurisdictions that have adopted similar definitions of pollution prevention including several U.S. states.[7]

RECOMMENDATION No. 2 - The definition of pollution prevention proposed in the strategy should be adopted by the government of Canada.

3.2 The Issue of Out-of-Process Recycling

One of the most controversial issue that arises with respect to the definition of pollution prevention is whether out-of-process recycling should be included as part of pollution prevention. Most advocates of pollution prevention would argue that in-process recycling and reuse (on-site closed-loop recycling) is a pollution prevention activity because substances move only inside a specific production process and never emerge as waste.

A collory to this position is that out-of-process recycling is **not** considered a pollution prevention activity. The views of the environmental and labour groups on this point are summarized in the report of the Pollution Prevention Legislative Task Force. In that report, it was stated that:

> The reuse of materials or their by-products by a separate manufacturing process (even within the same plant) or through an off-site facility is not acceptable as pollution prevention. The reason is that pollution/waste is created (even if later reused as valuable raw material) and the risk to workers, consumers and the community and the environment is increased due to the need for out-of-process handling, storage, transportation and reuse. ...including out-of-process recycling in the definition of pollution prevention would allow industry to look at "add ons" to existing ways of doing business, such as recycling programs, rather than fundamentally rethinking their processes and the design of their products.[8]

These views are adopted for the purposes of this submission.

RECOMMENDATION No. 3 - For the purposes of the proposed strategy, out-of-process recycling or reuse should not be considered as a legitimate pollution prevention measure and therefore should be excluded from the parameters of the definition.

4. The Environmental Protection Hierarchy

4.1 Pollution Prevention and the Hierarchy

On page 4 of the proposed strategy, there is a section on sustainable development. Accompanying the discussion is a diagram titled: "The Environmental Protection Hierarchy." It is submitted that this diagram, if it is to be a part of the proposed strategy, is incorrect and misleading in two ways.

First, it must be clarified that the pollution prevention concept should not be considered a part of the environmental protection hierarchy. Instead, pollution prevention should be a national policy that pervades all levels of decision-making in both the public and private sectors. It is a comprehensive approach that would inform matters from technological investment to procurement.

Pollution control cannot be accepted as a long-term legitimate environmental management strategy as the use environmental control technologies are typically associated with high capital and operating costs, and are of limited environmental effectiveness. Pollution control systems often result in the transfer of environmental problems from one media to another, rather than solving them. Pollution control should be considered as an interim measure until a pollution prevention regime can be put in place. Otherwise, difficulties in reaching the top of the hierarchy (pollution prevention) will justify the continuance of the next level of the hierarchy (pollution control approach).

RECOMMENDATION No. 4 - The Environmental Protection Hierarchy on page 4 of the proposed strategy must be redesigned. The Environmental Protection Hierarchy, if it is part of the proposed strategy, should be reconfigured to demonstrate that not only should be pollution prevention be at the top of the hierarchy, but that there be continuing effort in all respects to employ the approach. Pollution control, at best, should only be seen as an interim measure before a pollution prevention regime is implemented.

4.2 Environmental Hierarchy and Energy from Waste

On the Environmental Protection Hierarchy, "energy recovery" is placed immediately below pollution prevention. The term is not defined in the text. However, one popular definition of

energy recovery is energy derived from incineration of solid waste or some other waste. It must be made absolutely clear that energy recovery is not one of the "3Rs" and as such, has no place whatsoever in the hierarchy. Such a hierarchy will not be supported.

There is a wealth of information that could be relied upon in opposing incineration. Two of the strongest arguments are related to the negative impacts of dioxin emissions from the facilities and the disincentive such facilities create for waste reduction and recycling programs because of the demand for waste needed to make these facilities economically viable.

It should also be noted that the recent draft U.S. Environmental Protection Agency Dioxin Reassessment Study outlines some of the devastating health and environmental effects of dioxin pollution,[9] and identifies incinerators as a major source of dioxin emissions in North America. Furthermore, at a recent presentation by the Center for the Biological of Natural Systems at Queens City College, it was indicated that three of four most significant sources of dioxin emissions in the Great Lakes basin are energy from waste related: hospital incinerators, municipal solid waste incinerators, and the burning of hazardous waste incinerated in cement kilns.[10] Incineration and energy-from-waste systems also have been identified as major sources of other serious pollutants, such as mercury.[11]

RECOMMENDATION No. 5 - "Energy Recovery" be completely removed from the Environmental Protection Hierarchy on Page 4 of the proposed strategy.

5. Incorporating the Strategy into Legislation

The proposed strategy clearly states that a component of the action plan to further the strategy is the incorporation of pollution prevention into federal legislation.[12] We strongly support this element of the draft strategy and believe that the government of Canada should pursue it vigorously. The provision of a legislative structure for pollution prevention planning and activities would follow a trend in this regard, and in particular, at the federal and state levels in the United States.[13]

It is not clear in the proposed strategy, however, whether the proposed commitment is to incorporate pollution prevention into federal legislation is only with respect to activities within the federal government (i.e. federal departments, boards, agencies, and where appropriate Crown corporations), or to all areas of activity, public and private, falling under federal jurisdiction. We believe that the latter option is the one which the government must pursue.

Specifically, as has been proposed in submissions to the House of Commons Standing Committee on Environment and Sustainable Development for the purposes of the CEPA review process,[14] and in response to the government's proposed Toxic Substances Management Policy (TSMP)[15] pollution prevention plans to eliminate environmental release, including release to the occupational environment, should be required to be developed with respect to substances designated as "toxic" for the purposes of CEPA. In addition, the

manufacturing, use, and generation of substances found to be "toxic," persistent and bioaccumulative should be scheduled to be banned or phased out within appropriate time frames, except under exceptional circumstances. Finally, pollution prevention planning should be required for all workplaces covered by the *Canada Labour Code*.

RECOMMENDATION No. 6 - Pollution prevention planning requirements should be incorporated into federal legislation, and apply to federal government departments, agencies, boards and, where appropriate, Crown corporations, and other workplaces covered by the Canada Labour Code. As an immediate next step to the proposed strategy, Environment Canada should demonstrate leadership by implementing pollution prevention activities in procurement practices and operations, and undertaking environmental audits of pollution prevention activities. The findings of the environmental audits, which will assist the work of the Environmental Commissioner, should be subject to public review.

RECOMMENDATION No. 7 - Federal pollution prevention legislation should require to eliminate the use and generation of substances which are persistent, bioaccumulative, and considered "toxic" for the purposes of CEPA. Pollution prevention plans should be required to be developed for all other substances considered "toxic" for the purposes of CEPA.

RECOMMENDATION No. 8 - In addition, the Standing Committee on Environment and Sustainable Development should incorporate a list of substances deemed toxic into CEPA and for which regulatory action is mandate. The list of substances should be developed by referring to various lists compiled including but not restricted to the U.S. Clean Air Act, the Ontario Canadidate Substances List and the International Joint Commission.

One suggestion on implementing pollution prevention is to target existing federal action plans, i.e., Fraser River, Great Lakes and St. Lawrence Vision 2000, the Atlantic Ports Rehabilitation Program, in order to incorporate pollution prevention demonstration projects in these action plans. More specifically, the various multi-stakeholder advisory committees preparing these remediation plans could be asked to identify industrial sectors or even plants within their areas as candidates for pollution prevention. Once identified, pollution prevention strategies could be applied to the candidates selected and the results, if positive, could be showcased as concrete examples that pollution prevention can work.

By going the route of public advisory committees already involved with local cleanup plans, the federal government would not be directly perceived as intervening on provincial jurisdiction.

It is clear that the environmental community has always supported pollution prevention. The problem is making it work at the grassroots level. We believe that the approach proposed here could make pollution prevention theory a reality.

RECOMMENDATION No. 9 - To target existing federal action plans, i.e., Fraser River, Great Lakes and St. Lawrence Vision 2000, the Atlantic Ports Rehabilitation Program, in order to incorporate pollution prevention demonstration projects in these action plans. These demonstration projects can be used as concrete examples that pollution prevention can work.

6. The Need for Specific Programs, Timelines and Accountability Structures

The support for the proposed strategy cannot be given in a vacuum. While there is support for the direction of the document, there is a need, and a process for, the establishment of specific timelines and programs for pollution prevention together with lines of accountability to ensure those timelines and programs are furthered. In virtually every component of the workplan, there is a commitment to an overall program, without the necessary specificity to provide detailed comment. It is suggested that the government of Canada establish programs to further the pollution prevention framework established in the proposed strategy together with timelines for the adoption and implementation of those programs.

More specifically, reference should be made to the identification of the range of possible programs, both regulatory and non-regulatory, identified by the Pollution Prevention Legislative Task Force[16] and other proposals on the topic.[17] These programs would, in total, establish federal framework for pollution prevention. This framework would include a national policy for pollution prevention together with a series of programs.

RECOMMENDATION No. 10 - The proposed strategy should include a process to develop specific programs to further a federal pollution prevention approach with specific timelines attached to the establishment and implementation of those programs.

In particular, the federal government should focus its environmental technology development and environmental industry programs on the development and diffusion of pollution prevention skills and technology. Particular attention should be given to meeting the needs of small and medium sized enterprises in this area. Such firms typically lack the in-house research and development capacity and capital to develop and adopt pollution prevention technologies themselves.[18]

7. Relationship to International Programs and Responsibilities

Canada should play a leadership role in the promotion of pollution prevention activities. This should be reflected in Canada's position in international environmental and trade negotiations, and in the provision of international development assistance through the Canadian International Development Agency. Particular focus should be placed on promoting the elimination of the use and generation of persistent toxic substances, throughout the world.

RECOMMENDATION No. 11 - The promotion of pollution prevention, and particularly the elimination of the manufacturing, use or generation of persistent, toxic substances, should be reflected in Canada's position in international trade and environmental negotiations. The elimination of the use of such substances and the development of alternatives for use in agriculture and industry also should be promoted through the Canadian International Development Agency and the International Development Research Centre.

8. Relationship with Other Federal Initiatives

The proposed strategy has been presented at the same time that a number of other significant environmental initiatives are under way at the federal level. The relationship between the proposed strategy and these other initiatives is far from clear. In particular, the following questions arise:

(a) Has the proposed strategy been formally submitted to the Standing Committee on Environment and Sustainable Development to allow them the opportunity to include the principles in the upcoming report from the review of the Canadian Environmental Protection Act?

(b) How will the federal government's ability to implement the proposed strategy be affected by the harmonization initiative of the Canadian Council of the Ministers of the Environment (CCME)? We note that pollution prevention is one of the areas targeted for "harmonization" by the initiative. What does this mean?

(c) What is the relationship between the proposed strategy and the proposed TSMP for Canada which was released in November 1994?

RECOMMENDATION No. 12 - The proposed strategy should be submitted to the House of Commons Standing Committee on Environment and Sustainable Development for consideration as part of its review of CEPA.

RECOMMENDATION No. 13 - The federal government should provide a clear statement of its goals and objectives if the "harmonization" of pollution prevention is to be pursued through the CCME harmonization initiative. The implications of the harmonization initiative, particularly in the areas of monitoring, environmental law enforcement, and standards and policy development for the federal government's ability to implement its pollution prevention strategy should be reviewed prior to the conclusion of any harmonization agreement.

It should be noted that we regard the proposed pollution prevention strategy as a major

improvement over the proposed TSMP. In that document, the definition of "virtual elimination" is defined as "no measurable release," which by implication, invokes a pollution control approach. In response to this proposal, the Canadian Institute for the Environmental Law and Policy and the Canadian Environmental Law Association stated:

> "The proposed approach, which defines the goal of Track 1 as "no measurable release" allows a pollution control response rather than a pollution prevention response. Pollution prevention is defined as approaches that avoids or prevents the use and generation of toxic substances. Its strength is that it emphasizes changes in the industrial process through such techniques as raw product substitution, process reformulation, substitution, and other such techniques.
>
> "When the goal is defined as "no measurable release," legitimacy is given to continuing pollution control models that attempt to reduce emissions at the end-of-the-pipe. TSMP does not promote process change or other measures that avoid the use or generation of toxic chemicals. As such, TSMP reinforces present practices. It will not encourage innovation. It may lead industry to adopt more expensive, and ultimately less efficient, end-of-the-pipe measures. These investments will preempt other pollution prevention investments. In effect, these facilities will be held "hostage" to traditional pollution control technologies rather than pursuing pollution prevention strategies."[19]
>
> **RECOMMENDATION No. 14 - The proposed strategy should take precedence over, and supersede, the proposed Toxic Substances Management Policy for Canada released in November 1994.**

9. Conclusions

We regard the release of the document Pollution Prevention: Towards a Federal Strategy for Action as an important step forward in the development of a federal environmental policy framework. We are particularly supportive of the definition of pollution prevention presented in the document, and the commitment to incorporate pollution prevention into federal legislation. However, we remain unclear as to the scope of this commitment. We believe that the federal government should employ the full extent of its jurisdictional capacity to implement the proposed strategy.

The manner in which the strategy will be implemented remains unclear. Precise directions for legislative and regulatory change have yet to be presented. Other elements of an implementation strategy also have yet to be articulated, although we look forward to their development.

While we support the overall direction of the proposed strategy, several aspects of the draft document give us cause for concern. In particular, it the proposed strategy should clearly

exclude out of process reuse or recycling from the definition of pollution prevention. In addition, "energy recovery" should removed from any environmental protection framework or hierarchy, and the status of pollution control systems as interim measures should be emphasized.

Furthermore, the relationship between the proposed strategy and a number of other ongoing initiatives is unclear. We believe that the strategy should be presented to the House of Commons Standing Committee on Environment and Sustainable Development for consideration in its review of the CEPA, particularly, and regard the proposed strategy as a significant improvement over the contents of the November 1994 draft TSMP. This is especially true with respect to its recognition of the need to avoid and minimize the creation of pollutants, rather than manage and control them. At the same time, we are seriously concerned about the potential impact of the CCME harmonization initiative on the capacity of the federal government to implement its proposed pollution prevention strategy.[20]

We look forward to the next steps in this important initiative, and would be please to respond to any questions or comments you may have regarding our submission.

10. Summary of Recommendations

To assist the federal government in revising the proposed strategy, the recommendations have been summarized below.

RECOMMENDATION No. 1 - The federal initiative, Pollution Prevention: Towards a Federal Strategy for Action, should be accepted and an implementation strategy established as soon as possible.

RECOMMENDATION No. 2 - The definition of pollution prevention proposed in the strategy should be adopted by the government of Canada.

RECOMMENDATION No. 3 - For the purposes of the proposed strategy, out-of-process recycling or reuse should not be considered as a legitimate pollution prevention measure and therefore should be excluded from the parameters of the definition.

RECOMMENDATION No. 4 - The Environmental Protection Hierarchy on page 4 of the proposed strategy must be redesigned. The Environmental Protection Hierarchy, if it is part of the proposed strategy, should be reconfigured to demonstrate that not only should be pollution prevention be at the top of the hierarchy; but that there be continuing effort in all respects to employ the approach. Pollution control, at best, should only be seen as an interim measure before a pollution prevention regime is implemented.

RECOMMENDATION No. 5 - "Energy Recovery" be completely removed from the Environmental Protection Hierarchy on Page 4 of the proposed strategy.

RECOMMENDATION No. 6 - Pollution prevention planning requirements should be incorporated into federal legislation, and apply to federal government departments, agencies, boards and, where appropriate, Crown corporations, and other workplaces covered by the Canada Labour Code. As an immediate next step to the proposed strategy, Environment Canada should demonstrate leadership by implementing pollution prevention activities in procurement practices and operations, and undertaking environmental audits of pollution prevention activities. The findings of the environmental audits, which will assist the work of the Environmental Commissioner, should be subject to public review.

RECOMMENDATION No. 7 - Federal pollution prevention legislation should require to eliminate the use and generation of substances which are persistent, bioaccumulative, and considered "toxic" for the purposes of CEPA. Pollution prevention plans should be required to be developed for all other substances considered "toxic" for the purposes of CEPA.

RECOMMENDATION No. 8 - In addition, the Standing Committee on Environment and Sustainable Development should incorporate a list of substances deemed toxic into CEPA and for which regulatory action is mandate. The list of substances should be developed by referring to various lists compiled including but not restricted to the U.S. Clean Air Act, the Ontario Canadidate Substances List and the International Joint Commission.

RECOMMENDATION No. 9 - To target existing federal action plans, i.e., Fraser River, Great Lakes and St. Lawrence Vision 2000, the Atlantic Ports Rehabilitation Program, in order to incorporate pollution prevention demonstration projects in these action plans. These demonstration projects can be used as concrete examples that pollution prevention can work.

RECOMMENDATION No. 10 - The proposed strategy should include a process to develop specific programs to further a federal pollution prevention approach with specific timelines attached to the establishment and implementation of those programs.

RECOMMENDATION No. 11 - The promotion of pollution prevention, and particularly the elimination of the manufacturing, use or generation of persistent, toxic substances, should be reflected in Canada's position in international trade and environmental negotiations. The elimination of the use of such substances and the development of alternatives for use in agriculture and industry also should be promoted through the Canadian International Development Agency and the International Development Research Centre.

RECOMMENDATION No. 12 - The proposed strategy should be submitted to the House of Commons Standing Committee on Environment and Sustainable Development for consideration as part of its review of CEPA.

RECOMMENDATION No. 13 - The federal government should provide a clear statement of its goals and objectives if the "harmonization" of pollution prevention is to be pursued through the CCME harmonization initiative. The implications of the harmonization initiative, particularly in the areas of monitoring, environmental law enforcement, and standards and

policy development for the federal government's ability to implement its pollution prevention strategy should be reviewed prior to the conclusion of any harmonization agreement.

RECOMMENDATION No. 14 - The proposed strategy should take precedence over, and supersede, the proposed Toxic Substances Management Policy for Canada released in November 1994.

ENDNOTES

1. Canadian Institute for Environmental Law and Policy and the Canadian Environmental Law Association, A Response to the Proposed Toxic Substances Management Policy for Canada (November, 1994) [hereinafter referred to as A Response to the Proposed TSMP].

2. See: Reforming the Canadian Environmental Protection Act, A Submission to the Standing Committee on Environment and Sustainable Development, Edited by B. Mausberg, P. Muldoon and W. Winfield (September, 1994).

3. Pollution Prevention Legislative Task Force, Final Report (Sponsored by Environment Canada, September, 1993). [Hereinafter referred to as the Pollution Prevention Task Force Report].

4. Government of Canada, Pollution Prevention: Towards a Federal Strategy for Action Consultation Document, March 1994. [Hereinafter referred to as Pollution Prevention: Towards a Federal Strategy for Action].

5. Pollution Prevention Legislative Task Force, p. 14.

6. See: Reforming the Canadian Environmental Protection Act, A Submission to the Standing Committee on Environment and Sustainable Development, Edited by B. Mausberg, P. Muldoon and W. Winfield (September, 1994).

7. For example, see: P. Muldoon, "Incorporating Pollution Prevention into Part II of CEPA: An Agenda for Reform", (September, 1994).

8. Pollution Prevention Legislative Task Force, p. 21.

9. Presentation by Linda Birnbaum, Director of Environmental Toxicological Division, U.S. Environmental Protection Agency, on "Re-evaluation of Dioxin" at the Great Lakes Water Quality Board 102nd Meeting, Chicago, IL, July 15, 1993.

10. Presentation by Barry Commoner on March 30, 1995, Ann Arbor, Michigan, titled: "Quantitative Estimation of the Entry of Dioxins, Furans and Hexachlorobenzene into the Great Lakes from Airborne and Waterborne Sources."

11. Pollution Probe, Mercury Elimination and Reduction Challenge Project (Draft), written by Susan Sang and Bruce Lourie, (April, 1995).

12. Pollution Prevention: Towards a Federal Strategy for Action, p. 7.

13. For a review of regulatory and non-regulatory programs in the U.S., see: United States General Accounting Office, Pollution Prevention: EPA Should Reexamine Objectives and Sustainability of State Programs (January, 1994).

14. See: Reforming the Canadian Environmental Protection Act, A Submission to the Standing Committee on Environment and Sustainable Development, Edited by B. Mausberg, P. Muldoon and W. Winfield (September, 1994).

15. A Response to the Proposed Toxic Substances Management Policy for Canada, p. 4.

16. Pollution Prevention Legislative Task Force, section 5.3.

17. For example, see: Canadian Environmental Law Association, Incorporating Pollution Prevention into Part II of CEPA: An Agenda for Reform (September, 1994); Paul Muldoon, "Toward a National Pollution Prevention Strategy: Principles for Reform" in Canadian Bar Association Committee on Sustainable Development, Sustainable Development in Canada: Options for Law Reform (Ottawa, 1990).

18. See: M. Winfield, J. Rabantik, Putting the Environment into Environmental Industry Strategies: The Role of Environmental Industries in Restructuring of Sustainability (May, 1995).

19. A Response to the Proposed Toxic Substances Management Policy for Canada, p. 4.

20. See: The Draft Environmental Management Framework Agreement And Schedules: A Commentary and Analysis, prepared Shelly Kaufman, Paul Muldoon and Mark Winfield (March 1995).

Appendix I

Recommendations in Brief
to the Minister of the Environment
on the
National Pollutant Release Inventory

NATIONAL POLLUTANT RELEASE INVENTORY CITIZENS' CAUCUS

RECOMMENDATIONS IN BRIEF TO THE MINISTER OF ENVIRONMENT

ON

THE NATIONAL POLLUTANT RELEASE INVENTORY

January 1993

I. PURPOSE

a) The purpose of this programme should be to provide citizens and workers with information on the use, storage, release and management of hazardous chemicals in their communities and workplaces.

b) The NPRI should be used to track pollution prevention, toxics use reduction, and the management of hazardous chemicals. (Toxics use reduction means in plant process changes in production processes or raw materials that reduce, avoid, or eliminate the use of toxic or hazardous substances. Pollution prevention means the same thing but may be applied to a broader spectrum of industrial sectors such as agriculture. Toxics use reduction and pollution prevention do not include such things as out of process recycling, incineration, and the transfer of waste from one medium to another.)

c) The NPRI should be used to obtain information critical to emergency response and accident prevention.

II. PUBLIC ACCESS TO NPRI INFORMATION

a) The following principles should guide public access to NPRI data:

- NPRI information should be available on a facility specific basis.
- NPRI data should be available in raw data form.
- NPRI data should be made available to the public in appropriately aggregated forms.
- NPRI data should be available on a substance-specific basis.
- NPRI information should be as current as possible.
- NPRI information should be easy for the public to understand and interpret.
- The NPRI database should be comprehensive, making all relevant

information available to the public at one source.
- The public must have access to computerized and hard copy NPRI data without incurring prohibitive cost.
- The NPRI information should be easily accessible to people. It should be available at the local level. It should be available in hard copy, on computer disk, and by computer modem.

b) These principles can be implemented through the following mechanisms:
- The federal government should support a public education programme that could include the preparation of a citizens' guide, an NPRI newsletter, advertising, and training workshops. Most importantly, it should include a toll free number to respond to requests for information.
- The NPRI should be available at municipal and university libraries, regional provincial ministry of the environment offices and at regional Environment Canada offices. People should be able to gain access to the NPRI database without cost at these locations.
- The federal government should facilitate access to and use of the computer database by citizens and community organizations.

III. CANADIAN ENVIRONMENTAL PROTECTION ACT AS A LEGAL INSTRUMENT FOR THE NATIONAL POLLUTANT RELEASE INVENTORY

a) The Federal Minister of the Environment should immediately institute measures that will ensure that public access to the NPRI is not thwarted by CEPA confidentiality provisions.

b) NPRI should be mandated through legislation specifically referring to it. This can be done through the development of separate legislation or by amending CEPA.

c) New legislation or amendments to CEPA should protect public access to NPRI data and should require companies to substantiate upfront the need to keep NPRI reports confidential. Substantiation of the need for confidentiality should demonstrate that a) the information has not already been released, b) the information is not required to be released, c) the release of this information would cause substantial competitive harm, and d) the chemical identification is not well known in the industry or readily discoverable through reverse engineering.

IV. INFORMATION REPORTED UNDER NPRI

HAZARDOUS SUBSTANCE USE INFORMATION

a) The NPRI should include information on the use of toxic chemicals at facilities. Companies should be required to report on the total quantity

of a hazardous chemical that is manufactured, processed, used, and generated as by-product prior to any treatment, handling, transfer or release, and report the amount of that substance consumed, recycled or transferred in or as product. This information should be provided on a unit of production basis in order to be able to track the amount of substance used in relation to the amount of production at the facility from year to year.

b) In order to obtain a better understanding of progress being made to reduce a facility's reliance on toxic chemicals, facilities should be required to report percentage reductions or increases of a toxic chemical that each production unit at a facility uses, incorporates into products, or generates as nonproduct output (nonproduct output refers to the NPRI substance remaining at the end of the process prior to treatment, recovery, reuse, recycling or disposal). This reporting should be done on a unit of production basis and the amounts of chemicals used should be expressed in ranges in order to broadly assess the size of any reductions or increases in the use of chemicals.

c) Companies should report the types of pollution prevention techniques utilized to reduce their use of toxic substances.

RELEASE REPORTING

a) We support the MSAC recommendations that the amount of each NPRI toxic chemical released to air (via stack and fugitive emissions), land and water (including sewers and municipal incinerators) should be reported.

b) We support the provision that receiving water bodies be identified in NPRI reports.

c) Information on the quantity of substance used for each type of use (e.g. reactant) should be reported under the NPRI.

d) Reporting on a unit of production basis should be required in order to determine the influence of production changes on reductions in the use of toxic chemicals.

ON-SITE TRANSFERS OF HAZARDOUS SUBSTANCES AND WASTES

a) Facilities should be required to report on the amount of each NPRI substance generated as nonproduct output regardless of whether that substance is transferred on-site or off-site. In addition, companies should specify the amount of materials sent on-site and off-site for treatment, reuse, recovery, recycling, or disposal.

b) Facilities should specifically report the methods used for treatment, reuse, recycling, recovery, or disposal, and the name and address (location) of the receiving facility.

SUBSTANCES WITH POTENTIAL TO CAUSE CATASTROPHIC ACCIDENTS

a) Environment Canada should identify a list of substances that have the potential to cause catastrophic accidents if accidentally released. Reporting thresholds should be established that reflect the quantities that could cause catastrophic accidents.

b) Facilities that meet or exceed these thresholds should be required to report the maximum quantity of the chemical stored on site on any given day and the average amount stored in a day.

c) This information should be distributed to local fire departments, medical officers of health, and city clerks, and be made available to the public.

NPRI SUBSTANCES TRANSFERRED INTO PRODUCT

a) Transfers of NPRI substances into products should be included in the database.

V. REPORTING CONDITIONS

a) The caucus believes that the 10,000 kilogram threshold is too high. We believe that the threshold for all uses should be lowered to 5,000 kilograms.

b) The caucus opposes the ten employee threshold. Facilities that meet the manufacture, process and use threshold should be required to report irregardless of the number of employees.

c) We support the use of a release threshold only as a mechanism to capture by-product releases. This third condition can only be accepted if it is an or condition, this means that facilities that meet the use and production thresholds are still required to report. Industry has proposed this as an and condition; this is completely unacceptable to environmental representatives.

d) Facilities that are currently required to report releases under other federal regulations should not be exempt from reporting under NPRI if they meet the reporting thresholds.

e) Environment Canada should determine if their calculations of releases from gas stations will provide community specific information. If not, this exemption should be reconsidered. This exemption should not include tank farms or large gasoline distribution and storage centres. For the other sectors and activities being considered for exemption -- oil wells and mining extraction -- further study should be conducted during 1993 to demonstrate the need for exemption.

VI. CHEMICALS REPORTED UNDER THE NPRI

a) The current list of chemicals is very limited. Environment Canada should take steps to review and significantly expand the list for the next reporting years.

b) Chemicals included on the CEPA priority substances list should be included in the NPRI.

c) A formal process should be developed for listing and delisting chemicals. Citizens should be able to initiate this process and there should be a formal opportunity for public comment into any proposal for listing or delisting. Criteria for delisting chemicals should be based on the acute, chronic and environmental toxicity of a chemical or a chemical's potential to cause other environmental harm. Chemicals should not be deleted from the list unless it can be proven beyond a shadow of a doubt that a substance will not cause harm to human health or the environment.

d) Persistent, bioaccumulative toxic substances should be included on the NPRI substances list. Because these chemicals may be released in smaller quantities and not captured under the proposed reporting threshold, substantially lower reporting thresholds should be established for these chemicals.

e) Facilities that currently report releases to other provincial and federal databases, such as mercury releases from chlor-alkali manufacturing facilities and vinyl chloride releases from vinyl chloride and polyvinyl chloride manufacturing, should be required to report under NPRI if they meet the reporting requirements.

VII. ENFORCING THE NPRI

a) Environment Canada should develop a list of all companies that are likely to meet the reporting thresholds.

b) Environment Canada should develop an effective outreach programme to ensure that all possible reporters understand their responsibility.

c) Environment Canada needs to develop and fund a specific enforcement programme for NPRI. Further investigation of a legislative framework for compliance and enforcement should be investigated.

d) Environment Canada should develop a programme to verify the data submitted. This can include annual or periodic audits approved by an outside auditor.

e) The public should be given a role in enforcement including initiating an investigation and initiating a prosecution.

f) Mechanisms to protect whistleblowers should be incorporated into the NPRI.