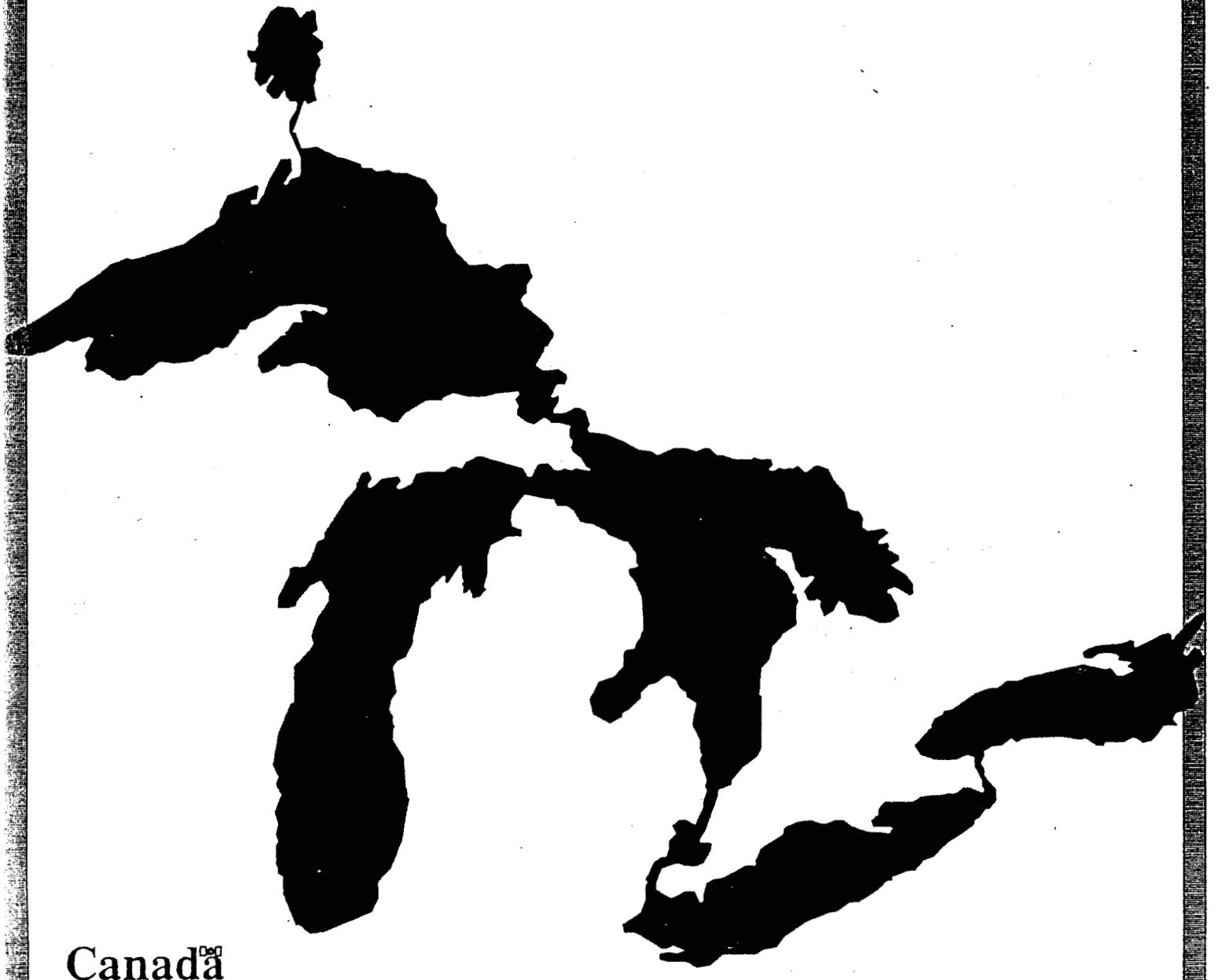
CANADA'S RESPONSE TO RECOMMENDATIONS IN THE SIXTH BIENNIAL REPORT OF THE INTERNATIONAL JOINT COMMISSION



Canada

CANADA'S RESPONSE TO RECOMMENDATIONS IN THE SIXTH BIENNIAL REPORT OF THE INTERNATIONAL JOINT COMMISSION

RESPONSE TO THE COMMISSION'S RECOMMENDATIONS THAT:

1. **The Parties adopt and apply a weight-of-evidence approach to the identification and virtual elimination of persistent toxic substances.**

   The federal government supports the weight of evidence approach and considers it essential approach to responsible evaluations of contaminant impacts. The government uses weight-of-evidence extensively to assess the need for policy and legislative action. For example, this approach is being employed in assessments undertaken for the Canadian Environmental Protection Act (CEPA), as well as the Hazardous Products Act and the Pest Control Products Act, to name a few.

   The federal approach recognizes that all legislative and regulatory actions may ultimately be subject to scrutiny in a court of law and must therefore be defensible from a scientific, policy and legal point of view. Canada's approach to restoration and protection of the Great Lakes continues to be founded on sound scientific knowledge, the best available information at the time, and rigorous assessment.

   There are several other initiatives that rely on the weight-of-evidence approach in the identification and control of persistent toxic substances. This includes the Accelerated Reduction/Elimination of Toxics (ARET) program, a multi-stakeholder process that selects substances for accelerated action primarily through voluntary measures. Much of the evidence and methodology for substance selection rely on the Province of Ontario's primary list of 21 candidate substances for bans and phase-outs, which has already undergone rigorous assessment.

   Another approach was used by the automotive manufacturing sector to identify 65 substances for high priority action in the Canadian Automobile Manufacturers Pollution Prevention Project.

   Weight-of-evidence also formed the basis for conclusions of the "Toxic Chemicals in the Great Lakes and Associated Effects" report which represents the most comprehensive synthesis of scientific knowledge on toxic chemicals to date.

   Canada encourages the IJC to maintain a dialogue with the Parties on approaches to the application of weight-of-evidence.

2. **The Parties expand the definition of persistent toxic substances to encompass all toxic substances: (1) with a half-life in any medium - water, air, sediment, soil or biota - of greater than eight weeks, as well as; (2) those toxic substances that bioaccumulate in the tissue of living organisms.**

The federal government supports a review of the definition of persistent toxic substances for the purposes of the Great Lakes Water Quality Agreement. The federal government is prepared to extend an offer to the IJC to become involved in the development process as it evolves. The government is cognizant that any change in definition for the Great Lakes will have implications for other areas of the country.

While the Great Lakes Water Quality Agreement uses the definition of persistence of eight weeks in water, a number of definitions that are broader in most cases are used in other programs.

In the scientific assessment of priority substances under the Canadian Environmental Protection Act, the federal government considers persistence as one of several factors used to determine whether a substance is "toxic" as defined under CEPA. Bioaccumulation potential is also considered in the CEPA assessments. Persistence is used not as a numeric cut-off but rather to provide insight into the substances' behaviour in the environment and the manner in which this will affect exposure of biota. In developing the first Priority Substances List (PSL), persistence was not considered in quantitative terms during the selection of substances. However, the government is preparing a proposal for the second PSL that will make use of "screening criteria" including persistence and bioaccumulation. It is likely that the cut-off criteria for persistence will not be consistent in either application or duration with that being proposed by the IJC because the criteria were developed for a different purpose.

The eight-week definition in water is used in the development of national water quality guidelines under the auspices of the Canadian Council of Ministers of Environment (CCME). The ARET program, on the other hand, uses a persistence definition of 50 days half-life in any medium (air, water or sediment). Persistence in groundwater is not considered a deciding factor, and persistence in soil is used only in the absence of other data, and with professional judgement in interpretation of the data.

3. **The Parties sunset PCBs and seek public acceptance of the means to effect their destruction.**

The federal government supports this recommendation. PCBs are strictly regulated under CEPA. The federal government has already set regulations that prohibit specific uses and commercial manufacturing or processing of PCBs. No new uses are permitted, and existing uses are restricted to a few electrical applications, heat transfer equipment, hydraulic equipment, electromagnets and vapour diffusion pumps. Storage of PCBs is also under strict regulation. Inventories are maintained of in-use and stored PCBs. PCBs are no longer manufactured in, or imported to, Canada.

The federal government has made a commitment in the Green Plan to destroy all federal PCBs in storage by 1996. The governments of Canada and Ontario have been seeking publicly acceptable means of PCB destruction for some time, and have devoted substantial resources to research and development on PCB destruction. However, public resistance to siting and destruction activities continues to be an impediment. Governments are currently active in promoting public acceptance through a number of demonstration projects that have full community involvement.

For example, the federal government is working with a community group in London, Ontario, on a project called "Londoners for the Safe Elimination of All PCBs" (LEAP), to increase community understanding of PCB management options and generate community support in the establishment of a facility for the destruction of PCBs in the London area. In addition, through the Demonstration of Site Remediation Technology (DESRT) program, the federal government is supporting the demonstration of an innovative thermo-chemical technology (Ecologic). The ability of this technology to destroy high-level PCB liquids and soils is currently being tested in Bay City, Michigan.

A national plan to destroy stocks of PCBs held by the federal government is well underway. Since 1989, 40 per cent of the federal stock has been safely destroyed in the Goose Bay project.

4. **The Parties sunset DDT, dieldrin, toxaphene, mirex and hexachlorobenzene and, in particular, seek an international ban on their production, use, storage and disposal.**

Canada has taken steps to action this recommendation. In Canada, DDT, dieldrin, toxaphene and hexachlorobenzene are no longer registered under the Pest Control Products Act for sale or use as pesticides. Mirex, although never registered as a pesticide in Canada, had industrial uses in this country. CEPA regulations prohibit the import, manufacture, processing, and offering for sale or use in Canada of mirex. Hexachlorobenzene is not used commercially in Canada, but it is released to the Canadian environment as a by-product from the manufacture and use of chlorinated solvents and pesticides, through long-range air transport and deposition (as are DDT and toxaphene), and as emissions from incinerators and other industrial processes. Hexachlorobenzene is on the CEPA Priority Substances List and is currently being assessed for potential to cause human health and environmental effects. If it is determined to be toxic as defined in CEPA, stakeholders will be consulted regarding options to reduce exposure to hexachlorobenzene through regulatory and non-regulatory measures. Hexachlorobenzene is also on the Province of Ontario's list of 21 candidates for possible ban or phase-out.

Canada has coordinated its pesticide control programs with those of the relevant international organizations and has worked vigorously towards developing an acceptable consensus position both within the OECD (Organization for Economic Cooperation and Development) and FAO (Food and Agricultural Organization). Canada will not press for a ban but continue to work diligently to develop the required international cooperation to ensure the proper storage, use and disposal of in-use chemicals, and in seeking viable, safe and effective alternatives.

DDT, dieldrin, toxaphene, mirex and hexachlorobenzene are currently being assessed by a Task Force on Persistent Organic Pollutants (POP), co-chaired by Canada and Sweden, under the UNECE LRTAP Convention (United Nations Economic Commission for Europe, Long-Range Transboundary Air Pollution), to which Canada is a party. The Task Force is charged with the responsibility to provide by 1994, a substantiation for a possible protocol to control the release of persistent organic pollutants into the environment. International support for such controls is growing. The need to control POP was identified in the Ministerial Declaration on the Protection of the Arctic Environment, the Helsinki Commission, and the North Sea Conference.

5. **The Parties, in consultation with industry and other affected interests, alter production processes and feedstock chemicals so that dioxin, furan and hexachlorobenzene no longer result as by-products.**

The federal government supports actions that prevent the formation and release of these compounds. Dioxins and furans are considered toxic as defined under the Canadian Environmental Protection Act and regulations for the pulp and paper industry are being implemented to prevent their formation. This will require alterations to production processes and substitution of chemical precursors.

Where hexachlorobenzene is determined to cause human health and environmental effects under the CEPA PSL assessment process, stakeholders will be consulted regarding options to reduce exposure through regulatory and non-regulatory measures. Hexachlorobenzene is also on the Province of Ontario's list of 21 candidates for possible ban or phase-out.

In addition, the federal government, working with the Province of Ontario, will be encouraging organizations and individuals located in the Lake Superior basin to prevent the creation of these substances. Prevention will involve the alteration of production processes as well as the substitution of inputs and feedstock chemicals and products.

6. **The Parties review the use of and disposal practices for lead and mercury, and sunset their use wherever possible.**

The federal government has taken significant steps to control the release of these metals. Canada has already advanced quite far in the prevention and control of these substances in such measures as strict control of chlor-alkali plants, and significantly restricting the sale of leaded gasoline. Lead has been banned in solder for food tins. Most recently, Canada has placed a new limit on the maximum amount of lead permitted in paints and obtained a voluntary agreement to phase out mercury in interior paint.

Lead emissions are regulated under CEPA's Secondary Lead Smelters Regulation. This regulation is in the process of being amended to ensure its enforceability and that both primary and secondary smelters are adequately dealt with. The federal Green Plan also commits the government of Canada to develop strategic options reports for toxic substances under CEPA for the metal mining, iron and steel, and primary non-ferrous smelting sectors. Potential sources and releases of lead from these sources in the Great Lakes Basin would be identified in these initiatives.

Mercury effluents and emissions from chlor-alkali plants are controlled under the Fisheries Act and CEPA, respectively. Mercury is on the Province's list of 21 candidates. Recommendations have been made by the ARET committee for reduction/elimination of mercury in metal smelter emissions, in automobile switches and of mercury-containing products in government procurement programs. The Canadian Battery Association has committed to virtually eliminating mercury-containing batteries by the year 1996, with some members moving on this as early as 1993.

The federal government is actively participating in an OECD review of sources and hazards, and experiences in risk reduction for lead and mercury. These documents will form the basis for the on-going Canadian evaluation of sources, exposures and hazards, and the need for additional control measures for both compounds.

7. **The Parties, in consultation with industry and other affected interests, develop timetables to sunset the use of chlorine and chlorine-containing compounds as industrial feedstocks and that the means of reducing or eliminating other uses be examined.**

The federal government does not support the recommendation. The federal government recognizes the public concerns regarding the possible long-term effects of chlorine use on the environment of the Great Lakes basin, and has devoted much effort and resources to providing the scientific underpinnings for action. Full account must also be taken of such factors as socio-economic impact, technology, availability of substitutes, as well as the full suite of measures that may be employed including regulatory or voluntary approaches, depending on the circumstances.

Canada will be proactive by reducing or eliminating those uses of chlorine-based compounds that are determined, on the basis of sound science, to be toxic and persistent, including those that are bioaccumulative. This is an integral part of our strategy under Canadian Environmental Protection Act, namely, to scientifically assess the potential posed by specific substances, to evaluate measures that can be used to reduce the exposure of humans or sensitive ecosystems, and to determine if federal regulations are warranted.

As a result, the government of Canada is not prepared to support a comprehensive ban on the use of chlorine and chlorine-containing compounds as industrial feedstock, as current scientific evidence does not support such a ban.

The government, under CEPA, is reviewing a number of priority substances, half of which are chlorinated. The results of this review will form the scientific basis for appropriate action to reduce risks that may be identified. In fact, the recent assessment of chlorobenzene has concluded that it is not toxic under the CEPA definition. This lends support to the approach of the federal government in not embarking on a comprehensive ban.

A comprehensive ban presupposes that organo-chlorines as a class are both toxic and persistent. However, organo-chlorine chemicals exhibit a broad spectrum of characteristics with respect to toxicity, persistence and bioaccumulation. While certain organo-chlorines, such as dioxins and furans (which are already subject to federal regulation for pulp mills) are considered toxic and persistent, scientific evidence does not support attributing these characteristics to organo-chlorines as a class. For example, recent research findings by Canadian scientists have shown that other organo-chlorines (as measured by AOX, Adsorbable Organic Halogens) in pulp mill effluents are not toxic, do not bioaccumulate and are only marginally persistent.

Other uses of chlorine that are being examined include the disinfection of drinking water and sewage. Evidence suggests that current practice and available technology require the use of chlorine in the disinfection of drinking water, but that viable alternative technologies such as UV treatment exist for municipal wastewater disinfection. Chlorine is now used primarily for its ability to disinfect to the point of end-use to prevent regrowth of bacterial contamination. It can be used in combination with chloramines or ozone, but cannot be safely replaced by non-chlorine substitutes because of its important residual disinfection properties. In view of the necessity for continued use of chlorine in drinking water disinfection, the federal government will focus efforts on reducing triholomethanes in drinking waters to the lowest levels achievable.

8. **The Parties, in cooperation with Lake Superior states and provinces, establish a specific date at which no point source release of any persistent toxic substances will be permitted into Lake Superior or its tributaries.**

A part of the "Binational Program to Restore and Protect Lake Superior" calls for the identification of point source discharges of persistent toxic substances. This is an issue that is being addressed by the Superior Work Group as a priority and until this information is ascertained and analyzed, it is premature to set a date for zero discharge. It should be remembered that the Lake Superior initiative is a pilot program involving regulatory measures, demonstration projects on pollution prevention, and community action. It is a complex initiative requiring the continued commitment of many stakeholders. Achieving the program goal will not be a simple task. The implementation of the actions identified in the binational program and others that may be initiated as more information becomes available is the most appropriate way to achieve the objectives of the program.

9. **The Parties, in cooperation with Lake Superior jurisdictions, agree to prohibit new or increased sources of point source discharges of persistent toxic substances; and establish a coordinated, planned phase-out of existing sources.**

The federal government, in consultation with the Government of Ontario, will consider further the implementation of this recommendation once an inventory of existing sources of persistent toxic substances is completed. The federal government is currently developing such an inventory. The federal government is, however, considering measures to deal with persistent toxic substances based on the results of the priority substances review under CEPA.

10. **The Parties, in cooperation with Great Lakes jurisdictions, develop and implement educational programs that incorporate the Great Lakes and ecosystem considerations into existing curricula and educational programs at all age levels.**

The federal government strongly supports this recommendation, and will look for opportunities, in cooperation with the Province of Ontario, to enhance government efforts in public education on the Great Lakes ecosystem.

Under the Green Plan, Canada's goal is the nurturing of an environmentally literate society, one in which people acquire the knowledge, skills and values necessary for responsible environmental decisions. One of the cornerstone programs is the Environmental Citizenship Initiative which encourages individuals, communities and organizations to become aware and involved in responsible environmental decision-making and action.

There is currently an extensive program of educational activities at both the federal and provincial levels, involving consultations and partnerships with a broad range of stakeholders, including the public and the teaching community, as well as learning packages. The federal government has been very active in providing information that is accessible to the lay-person in the form of fact sheets, videos, and learning kits. The federal government funds environmental non-government organizations (ENGOs) to develop courses on the Great Lakes. Educational programs are also part of individual Remedial Action Plans, as well as the Cleanup Fund initiatives.

There continue to be opportunities to focus on the Great Lakes basin, and the federal government will work closely with the Province of Ontario, which has jurisdiction over education, on the best approach to effectively educate and inform the public.

The recently opened Great Lakes Pollution Prevention Centre in Sarnia has a mandate to promote community-wide pollution prevention projects. As part of that mandate, the Centre is developing a Great Lakes environmental education/information clearing house, which will have, among other features, the capability to electronically access technical information, similar to that offered by UNEP and the U.S. EPA. The initial charge to the Centre includes the provision of training and planning services together with the maintenance of a multi-sector stakeholder process for pollution prevention.

The federal government welcomes the IJC's assessment of our current programs, and invites them to advise on future improvements.

11. **The Parties consider supporting, encouraging and cooperating in the identification and development of a UNESCO-MAB Biosphere Reserve proposal within the Lake Superior drainage basin as a means to further focus governmental, public, educational and scientific attention on preserving the high quality waters of Lake Superior.**

Canada is actively pursuing the entire range of possibilities in meeting the commitment made for a special protection designation for Lake Superior. In particular, Canada is currently supporting an assessment of a "Man and the Biosphere" (MAB) designation for some or all of the Lake Superior.

12. **The Parties join with jurisdictions and local governments in the identification and designation of sustainable development areas, and provide support under the Agreement's non-degradation policy to develop model for conserving and protecting aquatic areas of high quality, including the Grand Traverse Bay region, within a framework of environmentally sensitive and sustainable economic development.**

The federal government is committed to sustainable development throughout Canada. The environment-economy mix is a very important theme in the Green Plan. The Green Plan balances the need to clean up past mistakes with the need to prevent future problems through pollution prevention and resource conservation.

The federal government's strategic framework for action in the Great Lakes recognizes the importance of a healthy ecosystem in the context of a vibrant economy. One of the key principles of the framework is the promotion of behavioural change through education, economic incentives, and public participation. Conservation is an integral part of that effort.

Parks Canada is committed to the preservation of "special spaces" as part of the Green Plan's practical demonstration of sustainable development. Included in the meaning of special spaces are wetlands that are the object of a new federal-provincial wetlands action plan, wherein the two governments will seek to preserve, rehabilitate and enhance wetlands in the Great Lakes basin.

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