Reforming the *Canadian Environmental Protection Act*

Submission to the Parliamentary Review of CEPA, 1999

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PollutionWatch
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PollutionWatch is a joint project of Environmental Defence and the Canadian Environmental Law Association

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About the Canadian Environmental Law Association: CELA is a public interest law group founded in 1970 for the purposes of using and improving laws to protect public health and the environment. Funded as a legal aid clinic specializing in environmental law, CELA represents individuals and citizens' groups in the courts and before tribunals on a wide variety of environmental matters. In addition, CELA staff members are involved in various initiatives related to law reform, public education, and community organization. **www.cela.ca**
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About PollutionWatch: PollutionWatch (www.PollutionWatch.org) is a collaborative project of Environmental Defence and the Canadian Environmental Law Association. The web site tracks releases and transfers of pollutants across Canada based on data collected by Environment Canada through the National Pollutant Release Inventory (NPRI). NPRI does not include data from all pollutants or sources. Visitors to the PollutionWatch web site can identify facilities in their home towns by searching by postal code, access "quick lists" of the facilities reporting the largest releases and transfers of pollutants in the country, get trends from 1995-2003, or create their own ranked lists of facilities by province, industrial sector, or corporation.

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Summary

Canadians are concerned about the impact of pollution on the environment and their health. Children, including the developing fetus, are especially vulnerable and experience greater exposure than adults. Air pollution in particular is expensive, contributing to billions of dollars in health care costs. In a recent survey, Canada ranked last, or near to last, out of 29 developed countries when compared for several different air pollution releases.

The Parliamentary review of the *Canadian Environmental Protection Act, 1999* (CEPA) must address key gaps in federal law that enable ongoing exposure to toxic substances.

There is a huge backlog of chemicals in use – over 23,000 – that have not been fully evaluated for health and environmental impacts. Exposures for many chemicals of concern occur through the use of consumer products.

Some progress is occurring in deciding on the worst chemicals – those that are toxic, persistent, that build up in the environment and create the greatest exposure. But, the work to short-list, or *categorize*, these chemicals has problems. It is based on old and incomplete information. Continued efforts to categorize and assess chemicals need to occur within a stronger and modernized legal framework.

- Mandatory deadlines and stronger, less discretionary provisions are needed across multiple stages in the process to quickly review the worst chemicals and, where appropriate, eliminate them.
- Toxic substances assessment and management must take greater account of the many sensitive stages of human development.
- New requirements are needed to update the list of chemicals in use and to track changes, in use and emissions, over time.
- Greater accountability is necessary, within government and industry, to meet new and strict timelines. More resources are necessary in Health and Environment Canada to do the job.

The Great Lakes are a threatened national treasure in need of special protection under CEPA. Canada needs to honour past commitments to eliminate Great Lakes pollution and should do so by means of special provisions within CEPA.

Finally, CEPA must address the serious gap in federal regulation of toxic exposures from consumer products.

List of Recommendations

1. The categorization criteria in Section 73(1) of CEPA should be updated to require that Domestic Substances List substances be considered inherently toxic and identified for further action if they are known to be carcinogenic and/or known to be capable of reproductive or neuro-developmental toxicity, applying the same approach used in California Proposition 65. Once identified, these substances should be targeted for virtual elimination.

2. In identifying substances for assessment, in conducting assessments and in undertaking management activities of substances, CEPA should include explicit language directing that vulnerable populations be taken into account, including requirements to aggregate exposures to substances, to assess groups of chemicals with common mechanisms of toxicity, and to require an extra 10-fold child-protective safety factor in all risk assessment calculations.

3. The Minister of the Environment should make greater use of para. 71 (1) (c), requiring a proponent to conduct toxicological and other tests and submit the results. Findings of persistence, bioaccumulation or inherent toxicity should be considered sufficient to trigger requests for further data.

4. CEPA should be amended to include an explicit requirement that the Ministers must consider safe alternatives during assessments and management.

5. Section 73 of CEPA should be amended to allow government to delete substances from the DSL if they are no longer present in Canadian commerce. Any subsequent use of these substances would then be subject to the New Substances Notification requirements.

6. A new mechanism should be developed allowing government to track a DSL substance's type and quantity of use.

7. Substances that have met the criteria for categorization should be added to the list of chemicals reportable through the National Pollutant Release Inventory (NPRI).

Recommendations 8-15 speak to the insertion of timelines and deadlines across the entire exercise of chemicals management. Additional deadlines concerning substances targeted for virtual elimination are noted in Recommendations 16 and 17.

8. Where "immediate action is required to deal with a significant danger to the environment or to human life or health", the CEPA ministers have the power in subs. 94 (1) to take such action by issuing an interim order. The order may include any provision that may be contained in a regulation made under subs. 93 (1). The making of such an order is subject to a number of procedural hurdles, and ceases to have effect unless it is approved by cabinet within 14 days after it is made. Greater use of this provision should be encouraged in order to address threats posed by the most toxic substances. Further investigation may be required to determine the greatest obstacles to more frequent use of this provision.

9. CEPA currently requires that following categorization, all substances, even those substances identified as having potentially dangerous properties, are subject to a "Screening Level Risk Assessment" (s. 74), before action is taken on them. In an amended CEPA, those substances identified through categorization as persistent, bioaccumulative *and* inherently toxic (PBiT) should be considered CEPA-toxic, unless toxicity data submitted by industry demonstrate no harm to human health and the environment. They should be added to Schedule 1 immediately, and a regulation or instrument implementing virtual elimination should be proposed within one year.

10. For persistent and inherently toxic (PiT) or bioaccumulative and inherently toxic (BiT) substances, the 500 highest priority (according to Environment Canada) eco-toxic and 100 highest priority (according to Health Canada) human health toxic substances should have:
    - a screening assessment within two years to determine CEPA-toxicity;
    - a management plan in place for CEPA-toxic substances in one more year; and
    - two more years for implementing the management plan.

11. Where a substance is to be assessed through CEPA provisions other than categorization, such as a recommendation by any person (subsection 76 (3)); information about severe restrictions or prohibitions of a substance by another jurisdiction (section 75); or a report by a company or other person (section 70)), CEPA should be amended to require:
    - a screening assessment within one year to determine CEPA-toxicity;
    - a management plan in place for CEPA-toxic substances in one more year; and
    - two more years for implementing the management plan.

    These suggested timelines could be tighter for a substance that the assessment suggests is of greater concern; for example, if the substance is a PBiT, the accelerated timelines recommended above would apply.

12. Useful ways of streamlining the assessment process include:
    - Reducing the two cabinet approvals to one: the requirement for cabinet approval of a listing decision in subsection 90 (1) should be removed. The decision to list a substance on the TSL, which is based on the results of an assessment, should be performed by one or both of the CEPA ministers, not by the full cabinet.
    - Reducing from five to two years the effective deadline for completing an assessment once a substance is on the Priority Substances List (subs. 78 (1)).

13. If substances are found to require a full Priority Substance List assessment following their screening assessment, there should be a mandatory requirement for proponents to provide the necessary data within a specified timeframe, and the ministers should be required to complete the assessment within four years of the substance being categorized.

14. After a substance has been through a full risk assessment, failure to provide data on a substance that is persistent or bioaccumulative and inherently toxic should result in automatic designation of the substance as CEPA-toxic, and phase-out of the substance should be required, including a sunset date after which the substance may no longer be manufactured, imported or used. Where there is a need for continued use of the substance, a two-year time limitation should be applied, with one allowable renewal.

15. Additional resources should be allocated to Health Canada and Environment Canada, in order to ensure the effective and accountable implementation of CEPA.

16. The definition of virtual elimination in CEPA should be consistent with the spirit of the Great Lakes Water Quality Agreement and the reports of the International Joint Commission, which are centred on eliminating inputs of persistent toxic chemicals, with actions rooted "in the philosophy of 'zero discharge'" The CEPA definition should be revised to include the cessation of the intentional production, use, release, export, distribution or import of a substance or classes of substances. Where a substance is produced as a by-product, virtual elimination should include changes to processes, practices, and substitution of materials or products to avoid the creation of the substance in question.

17. The requirement for a precise minimum level of quantification should be removed from the virtual elimination section. Rather, reasonable release limits to account for trace amounts should be applied.

18. A new Part of CEPA should be created to recognize areas that are environmentally important because they are both nationally or internationally significant, and because they are threatened by toxic pollution. This new Part would then be used to recognize the Great Lakes basin as deserving of special provisions.

19. As part of the Great Lakes section of CEPA, the Act should:
    - Contain a legislative commitment to implement the Great Lakes Water Quality Agreement;
    - Establish a Great Lakes coordinating office within the Government of Canada, responsible for coordinating federal Great Lakes programs and interjurisdictional programs;
    - Create a Great Lakes research consortium among universities and the governments of Canada, Ontario and Québec that would integrate and build upon current research into threats and stresses to the biological, physical and chemical integrity of the Great Lakes basin ecosystem, and have a mandate to implement pollution prevention, toxic use reduction and product substitution through technological innovation. The research would be highlighted and supported by the members and activities of the International Association for Great Lakes Research;
    - Fund the consortium through an ongoing, secure Great Lakes Research and Restoration Fund;
    - Develop specific requirements for monitoring both environmental conditions and the measures taken to address and improve them. This could be achieved through enhancements to the NPRI, and maintenance of an inventory of Great Lakes protection and restoration programs, including an inventory of investigations, prosecutions and convictions carried out in the basin under relevant legislation;
    - Require that substances used in the Great Lakes basin that are carcinogenic, endocrine-disrupting, or pose particular threats to children's health are identified and within two years, mandatory action plans for eliminating those substances (including timelines) are developed, then implemented.
    - Mandate reporting intended to highlight progress in protecting the basin, with an expert scientific panel struck to evaluate such efforts and report to Parliament;
    - Set overall pollution prevention goals for the region on five- and ten-year timelines, with elimination goals and action plans for carcinogens and CEPA-toxic substances, and reduction goals for particulates and smog precursors.

20. CEPA should be amended to include adequate legislative authority to prohibit and/or regulate toxic substances found in consumer products, both for the environmental and human health impacts. The effect of the new provisions, in keeping with the "materials use" approach described below, should be to prohibit the use of toxic substances in products, and to control their subsequent release where outright prohibition is not possible.

21. CEPA management of toxic substances in consumer products should follow a "materials use" approach. When a substance is added to the List of Toxic Substances, its use in products should be banned, with the only exceptions being essential uses where there are no reasonable alternatives. A proponent of such a product wishing to except the product from the ban could apply for an exception. In order for the exception to be granted, the proponent would need to explain to the Ministers or their designates, in a publicly accessible process, why no alternative to or lower quantity or concentration of the substance was reasonably possible. Other uses would simply not be allowed either domestically or in imported products. For substances that are in widespread use, such as CO2, the Minister should have the authority to grant an exemption for that substance. Such a "materials use" policy would be far more effective and efficient than regulating product by product.

22. CEPA should give the Ministers of Health Canada and Environment Canada authority to reject products containing or emitting substances that are hazardous to health or the environment, including the power to recall products from retail and wholesale operations.

23. CEPA should be amended to require consumer product warning labels notifying the public if a product contains substances known to be carcinogenic or toxic to human reproduction and development, according to recognized lists such as Proposition 65 in the state of California and the International Agency for Research on Cancer.

24. CEPA needs stronger authority to use the precautionary principle to ban or significantly reduce the most dangerous substances. Such authority would better enable the departments to eliminate or reduce dangerous risks in the absence of full scientific certainty about toxic substances. Explicit precautionary language should be added at key stages of the CEPA toxic substance management process.

25. The burden of demonstrating safety should be on those wishing to introduce new chemicals or re-introduce banned chemicals, but only once they could demonstrate safety after a comprehensive evaluation. The Authorization process under REACH and portions of the revised registration regime of the *Pest Control Products Act* offer examples of this approach.

26. Existing language that limits actions only to those that are "cost-effective" should be removed from the definition of the precautionary principle, in order to better place the emphasis on protecting the environment and human health.

27. The CEPA review should also consider overarching federal government policies that deal with risk management and regulation-making and their impact on CEPA implementation.

28. Industry should be required to demonstrate why a substance that is persistent, bioaccumulative and inherently toxic (PBiT) should not be considered CEPA-toxic. Substances other than PBiTs that are identified through categorization as requiring priority assessment should be considered CEPA-toxic unless data demonstrating otherwise are provided by the proponent. A similar explicit onus should be placed on proponents of substances that are prohibited or severely restricted in other jurisdictions.

29. The Government of Canada should be required to maintain a publicly-available inventory of information gathered (e.g. relating to the properties of substances) under CEPA, and to publish it on the CEPA Registry.

30. The environmental registry should inform the public of
    - Notices, including notices of objection;
    - Any proposal for the issuance of an approval, regulation, revision or revocation of a regulation, order, or any policy; and
    - Any environmental protection actions under section 22.

31. New provisions should be included in CEPA allowing for the publication of notices of proposals for decisions, and notices offering opportunities for public comment on those impending decisions.

32. The committee should call evidence and review the actual use of confidentiality claims under CEPA, in order to determine how and to what extent the provisions have been used to protect "the interest of public health, public safety or the protection of the environment," and whether the provisions need to be strengthened in order to enhance the information available to the public.

33. The preconditions to bringing an environmental protection action should be removed.

34. More public information on the activities of the National Advisory Committee, and public access to its meetings, is required in order to enhance public involvement in decision-making.

1. Introduction and Context

The *Canadian Environmental Protection Act* (CEPA) is the backbone of Canadian environmental legislation. It brings to one place the powers to deal with most of Canada's significant environmental problems – air pollution causing respiratory illnesses, persistent organic pollutants that are building up in our bodies, greenhouse gases leading to climate change, and many other toxic pollutants that are contaminating our environment and ourselves.

The mandatory parliamentary review

The parliamentary review of CEPA presents an opportunity to close the gaps in our regulatory system to ensure Canadians' health and environment are adequately protected from toxic chemicals. Scientific study continues to paint a clearer picture that pollution in Canada is affecting our health and the health of our environment. Public concern continues to grow as well. Children are especially vulnerable and protecting their health – and the protection of future generations – is at the core of sustainable development.

The committee should see this review as an inquiry into the state of pollution in Canada and into the state of our health. The review should be an investigation of whether CEPA has done its job promoting clean air, clean water and clean food.

The pollution in people – results of biomonitoring

Canadians are exposed to toxic chemicals every day through air, water and land-based sources, and through food and commonly used consumer products. In 2005, Environmental Defence tested 11 people from across the country and found levels of 60 of the 88 chemicals studied in their bodies. Of the 60 chemicals detected: 41 are suspected cancer-causing substances; 53 are chemicals that can cause reproductive disorders and harm the development of children; 27 are chemicals that can disrupt the hormone system; and 21 are chemicals associated with respiratory illnesses.

A June 2006 follow-up study, *Polluted Children, Toxic Nation,* tested the blood and urine of 13 family members (seven children, six adults). Expert laboratories in Quebec and British Columbia tested the children and their parents for 68 individual chemicals. They found a total of 46 of the 68 chemicals tested (68 per cent), including 38 chemicals that can cause reproductive disorders and harm the development of children, 38 suspected cancer-causing chemicals, 23 chemicals that can disrupt the hormone system, 19 neurotoxins, and 12 chemicals associated with respiratory illnesses. On average, 32 chemicals were found in the parents and 23 were found in the children.

The Environmental Defence tests comprise some of the only Canadian data available. In contrast, the United States and Germany have national biomonitoring programs to measure contaminants in the child and adult populations. The US program is now in its third cycle, and the results show that a representative sample of the American population is routinely exposed to

multiple pesticides, metals, and industrial chemicals, including many chemicals that originate in consumer products.

Phthalates are an important and surprising example. These chemicals are contained in many cosmetics and multiple consumer products made of soft plastics. Scientists did not expect to find that people's bodies commonly contained these chemicals; nor did they expect to find that levels in children were consistently higher than in adults.[1]

Monitoring data from the Great Lakes and the Arctic similarly confirm that perfluorinated substances, which are widely used as stain and water resistant coatings, are detectable in tissues of various wildlife species, including those commonly used as food sources.[2] These chemicals are linked to reproductive and developmental disorders.

The greater vulnerability of children[3]

Children are especially vulnerable to chemical exposures. The greatest vulnerability occurs in the womb, at the time when all the organs and systems of the body are developing. It is well established that most of the metals, pesticides and other chemicals circulating in a mother's body cross the placenta.

Throughout their lives but especially in the critical early years, children are more highly exposed because they consume more food and liquids and breathe more air per unit of body weight. Their ability to metabolize, detoxify and excrete chemicals is developing in the womb and is immature and still developing until at least age six months. The lungs and brain continue to develop until the end of adolescence.

Chemical exposures at critical periods of development can cause irreversible damage or set children up for serious long-term health consequences, including greater risk of early-life cancers. Children living in poverty are at greater risk since poverty is a known risk factor for greater exposure to environmental contaminants. With 20 percent of children in Canada living in poverty, this translates into a very large number of at-risk children.

A large body of recent scientific evidence clearly links both indoor and outdoor air pollution as contributing to the high burden of respiratory illness among children in Canada and other industrialized countries. Health Canada notes that 12 percent of children in Canada have asthma, thought to be a four-fold increase since the 1970s.[4]

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[1] All of the US biomonitoring reports are available on-line at www.cdc.gov/exposurereport

[2] Presentation by Derek Muir on February 6, 2006 at the multi-stakeholder meeting in Ottawa on Perfluorinated Carboxyclic Acids and Precursors.

[3] For detailed references for this sub-section, see: Canadian Partnership for Children's Health and Environment, 2005. *Child Health and the Environment – A Primer*, on-line at: www.healthyenvironmentforkids.ca and Toronto Public Health, 2005. *Environmental Threats to Children: Understanding the Risks, Enabling Prevention*, on-line at: www.toronto.ca/health

[4] Health Canada, 1999. Measuring Up: A Health Surveillance Update on Canadian Children and Youth. Rusen ID, McCourt C (eds.) On-line at: www.hc-sc.gc.ca/pphb-dgspsp/publicat/meas-haut/mu_r_e.html

Additional evidence links exposure to toxic chemicals with many other serious health conditions including several forms of cancer, reproductive problems, birth defects, low birth weight, and impacts on the developing brain that can manifest as intellectual deficits, autism, learning disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and additional behavioural problems. Solid evidence exists linking these conditions with a few chemicals. A large and rapidly increasing body of scientific evidence is drawing associations between these conditions and hundreds, and perhaps thousands, of additional chemicals. Widespread exposure occurs for the entire population as this evidence base is gathered and debated, leading scientists to conclude that:

> *We are conducting a vast toxicological experiment in which our children and our children's children are the experimental subjects.*[5]

In the context of children's health, cancer in children and among young adults deserves special mention. Cancer among children is rising in the US and across Europe, though the upward trend has not been visible in Canada. This difference in Canada could simply result from the small number of cases in a relatively smaller population, making it difficult to find statistically significant changes.

Among young adults (age 20-44 years) in Canada however, several cancers are on the rise. Significant increases are apparent in thyroid cancer in men (4.2 percent per year) and women (6.6 percent per year). Non-Hodgkin's lymphoma has increased in both sexes (3.5 to 4.2 percent per year) as well as lung and brain cancers among women (1.9 to 2.0 percent per year) and testicular cancer among men (1.7 percent per year).[6]

The causes of these cancer increases are not well understood. However, since cancer is known to develop over a long period of time, womb and early childhood exposures, as well as the environmental and occupational exposures of both parents, are suspected as contributing factors. Similarly, the even more rapid increases in prostate cancer in men and breast cancer in women are likely caused in part by increases in environmental pollution, including early life exposures during developmental periods, which are times of heightened vulnerability to carcinogens.

Estimating the cost of illness from environmental exposures

In 2005, the Ontario Medical Association conservatively estimated that two air pollutants, (ground level ozone and fine particulate matter) will be responsible for over 5,800 premature deaths in Ontario, over 16,800 hospital admissions, nearly 60,000 emergency room visits and over 29 million minor illness days, costing Ontario almost $1 billion in a single year.[7]

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[5] Dr. Herbert Needleman, Professor of Psychiatry and Pediatrics, University of Pittsburgh, quoted by Dr. Philip Landrigan, Mount Sinai School of Medicine, keynote address to Children's Environmental Health II: A Global Forum for Action (Washington, DC: September, 2001).

[6] Canadian Cancer Society and National Cancer Institute of Canada, 2002. Special Report on Cancer in Young Adults. On-line at: http://129.33.170.32/vgn/images/portal/cit_776/0/51/72969285cw_stats2002_en.pdf

[7] Ontario Medical Association, 2005. The Illness Costs of Air Pollution: 2005-2006 Health and Economic Damage Estimates. On-line at: www.oma.org/phealth/ground.htm

The four-fold increase in childhood asthma has lead to corresponding economic and social costs. Asthma is the leading cause of child hospitalization and school absenteeism and fully one-third of all health coverage expenses for children in Ontario go towards the treatment of asthma.[8]

US research suggests that the prevention of pollution exposure could result in massive savings in health care, human productivity and social costs. One study estimated that $54.9 billion is spent annually on environmentally-induced disease in US children,[9] including $9.2 billion for certain brain-based disorders (intellectual deficits/mental retardation, autism and cerebral palsy), $43.3 billion for lead poisoning, $0.3 billion for childhood cancer and $2 billion for childhood asthma. The study used conservative assumptions and excluded related costs to families or later complications of these health conditions.

An increasing pollution problem; so far an inadequate response

More than 4 billion kilograms of air pollutant releases were reported by Canadian industrial facilities in 2003, a number that has been increasing. Canada's greenhouse gas emissions are 27 percent higher than 1990 levels. Canada continues to fall behind as other developed countries like the United Kingdom, France, Sweden, Germany and Iceland have all reduced their greenhouse gas emissions and emit less than they did in 1990. In fact, only two countries (Austria and Denmark) are further behind in their Kyoto targets than Canada, and Canada is the only country that has ratified the Kyoto agreement but that is not committed to reaching its target.

According to a recent study of Organization for Economic Cooperation and Development (OECD) countries,[10] Canada ranks 29th out of 29 industrialized nations in releases of volatile organic compounds, 27th out of 28 in sulphur oxides, 26th out of 28 in nitrogen oxides, 28th out of 28 in carbon monoxide, 12th out of 14 in ozone-depleting substances, and 27th out of 29 in greenhouse gases.

A recent comparison between Canadian and US industrial sites in the Great Lakes found that per facility, we emit 93 percent more potentially cancer-causing air pollutants and almost four times the pollutants that can cause reproductive or developmental harm.[11] The United States has legally enforceable National Ambient Air Quality Standards and Water Quality Criteria, whereas Canada does not. The United States has strong regulations as well as agreements with companies to phase out some of the most problematic chemicals in use, like flame retardants and stain repellants, while we are still trying to finalize our assessments. The United States has a

[8] Ontario Public Health Association, 2005. School Buses, Air Pollution and Children's Health
[9] Landrigan et al, 2002. Environmental Pollutants and Disease in American Children: Estimates of Morbidity, Mortality and Costs for Lead Poisoning, Asthma, Cancer, and Developmental Disabilities. *Environmental Health Perspectives* 110(7):721-728.
[10] Gunton, T.I. (2005). *The Maple Leaf in the OECD: Comparing Progress Toward Sustainability*. David Suzuki Foundation and Sustainable Planning Research Group, School of Research and Environmental Management, Simon Fraser University.
[11] Pollution Watch, February 2006. Partners in Pollution: An Assessment of Continuing Canadian and United States Contributions to Great Lakes Pollution, p. 12 (figures in the study were drawn from the US Toxics Release Inventory and the Canadian National Pollutant Release Inventory).

comprehensive program to test for body chemical levels (biomonitoring). We don't even know how much lead our children are being exposed to.

Scope of this submission

This submission addresses two related aspects of the *Canadian Environmental Protection Act.* First, it assesses the progress made and improvements needed in addressing the large backlog of chemicals in commercial use in Canada – the categorization effort under CEPA – as well as the management of new chemicals in commerce, and recommends improvements to these processes. Second, from our experience with the implementation of CEPA, this submission focuses primarily on a series of recommendations for improving this law.

Time constraints did not allow a comprehensive review of all aspects of CEPA. However, we can provide more detailed input to specific areas on request, and can assist parliamentarians and/or the two CEPA departments in developing more specific recommendations for amendments.

2. Categorization and Assessment of Substances

The problem

The categorization of existing substances on the Domestic Substances List (DSL) for persistence, bioaccumulation and inherent toxicity (PBiT) was mandated by section 73 of CEPA 1999, and will be completed and published in September of 2006. While reaching this milestone represents important progress, the results will not capture all the worrisome substances on the list. Nor is it clear whether those that do meet the categorization criteria will be eliminated quickly or, if necessary, assessed promptly and in a way that is protective of children and the environment.

The current situation

The Domestic Substances List comprises substances that were in use between 1984 and 1986. CEPA requires that these substances be categorized for further assessment and action if they are persistent, bioaccumulative or inherently toxic to humans or the environment, or if they pose the greatest potential for exposure to humans.

Further "screening assessment" of a substance, "in order to determine whether the substance is toxic or capable of becoming toxic", is required by section 74. However, it may be argued that this stage can be completed very quickly in the case of substances that present the greatest potential for exposure, or are persistent or bioaccumulative and inherently toxic. Such substances are among the best candidates for priority action under CEPA.

The following subsections address issues arising with respect to categorization and assessment of DSL substances. Additional issues are raised in light of the fact that the information used to generate the DSL is over 20 years old. Recommendations in this section are closely linked to the issues of insufficient mandatory timelines and virtual elimination, addressed in sections 3 and 4 of this submission.

Categorization of Substances

While the current approach has provided a good start, it has not gone far enough:

- Categorization depends on available data only, with no new data generated to fill the widespread gaps in information about whether substances are persistent, bioaccumulative or inherently toxic.
- Health Canada's approach for identifying substances that have the greatest potential for exposure is based on use and volume data (not actual exposure data) collected from industry from 1984 to 1986. There has been little attempt to update this information. It also fails to fully consider all exposure routes, especially to children.
- CEPA does not define "inherent toxicity." Environment Canada's approach to inherent toxicity refers only to toxicity to fish, ignoring effects (hormone disruption in particular), on other wildlife.
- Health Canada is assessing inherent toxicity primarily by looking at other jurisdictions' lists of toxic substances. Their more detailed and thorough Complex Hazard Tool is not being applied to many substances.
- The effort to categorize substances for their persistence, bioaccumulation and inherent toxicity may fail to adequately identify other chemicals on the basis of their carcinogenicity, neurotoxicity (including developmental neurotoxicity), reproductive or developmental toxicity or endocrine disrupting potential. These health effects are of particular relevance to prenatal and child health. At a minimum, categorization criteria could be expanded to include as "inherently toxic" those substances that are known to be carcinogenic or reproductive and/or developmental toxins similar to the approach used by the State of California in 2003 amendments to the *Safe Drinking Water and Toxic Enforcement Act* of 1986. These provisions are commonly referred to as Proposition 65.[12] This new categorization requirement would logically be applied to those substances (approximately 19,000) that are not included in the results of the initial categorization process due to insufficient data on currently prescribed criteria (i.e., PBiT).

Assessment of Substances

The assessment provisions in CEPA do not include explicit requirements for considering the protection of children and other vulnerable populations. By contrast, the revised and soon to be promulgated *Pest Control Products Ac*t (PCPA) contains specific language mandating the use of additional safety factors, in order to begin to ensure that risk assessments are protective of the

[12] The Proposition 65 provisions require the Governor of California to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. See details at: http://www.oehha.ca.gov/prop65.html

most vulnerable populations. Additional child-protective measures incorporated into the revised PCPA include requirements to assess groups of substances with common mechanisms of toxicity, and to aggregate exposure from multiple pathways.

These requirements can help ensure a more comprehensive and realistic approach to assessing multiple exposures to multiple chemicals. While some departmental policies are in place to apply these modernized approaches, they need to be enshrined in CEPA.

In assessing whether a substance is toxic, the Minister of the Environment is empowered by para. 71 (1) (c) to require the creation of new data from industry, but only where both Ministers "have reason to suspect that the substance is toxic or capable of becoming toxic". Government has resisted applying "suspicion of toxicity" to situations where data gaps and uncertainties exist. Under such circumstances, the assessment of substances with data gaps could be postponed indefinitely. Findings of persistence, bioaccumulation or inherent toxicity should be considered sufficient for triggering requests for further data.

Addressing Changes to Outdated DSL Information

CEPA fails to provide government with a means of deleting from the DSL those substances which are no longer being used in Canadian commerce. If and when such a substance is reintroduced, although it has met the categorization criteria, CEPA does not set out how, or when, the substance should be assessed and managed.

It has been suggested that these substances could fall under the significant new activity (SNAc) provisions in CEPA to set the use level at zero. A more efficient approach is to delete the substance from the DSL and to require new substance notification before the substance may be used, manufactured or imported.

CEPA also does not provide a mechanism for tracking the use of substances on the DSL. Often, substances are essentially excluded from further assessment about toxicity on the basis of their low exposure or benign applications. However, if the amount or type of use changes, exposure and related toxicity scenarios could also change.

This is a pressing concern with respect to the existing substances being categorized, and to new substances being introduced to the DSL through the New Substances Notification Program. Government could conceivably apply the SNAc provision (subs. 81 (4)) of CEPA to these substances so that industry must notify government of any significant changes in use, but this would be highly inefficient.

The problems with SNAcs include the slowness of operating on a substance-by-substance basis, that the process is triggered only by "significant" new uses, and that the Minister must suspect that the new activity is likely to result in the substance meeting the "CEPA-toxic" criteria. The current onus is therefore on the government to demonstrate that a valid suspicion exists. The system cannot operate effectively without a mechanism in place to track changes in amount, or type, of use of substances on the DSL.

Finally, the categorization framework, and CEPA in general, require consideration of the existence of safe alternatives in both the assessment and management of potentially toxic substances. The current provision regarding the consideration of alternatives (Section 68), is discretionary and ineffectual.

Recommendations

(NB: see also recommendations concerning *insufficient mandatory timelines* and *virtual elimination* in the following sections)

1. The categorization criteria in Section 73(1) of CEPA should be updated to require that Domestic Substances List substances be considered inherently toxic and identified for further action if they are known to be carcinogenic and/or known to be capable of reproductive or neuro-developmental toxicity, applying the same approach used in California Proposition 65. Once identified, these substances should be targeted for virtual elimination.

2. In identifying substances for assessment, in conducting assessments and in undertaking management activities of substances, CEPA should include explicit language directing that vulnerable populations be taken into account, including requirements to aggregate exposures to substances, to assess groups of chemicals with common mechanisms of toxicity, and to require an extra 10-fold child-protective safety factor in all risk assessment calculations.

3. The Minister of the Environment should make greater use of para. 71 (1) (c), requiring a proponent to conduct toxicological and other tests and submit the results. Findings of persistence, bioaccumulation or inherent toxicity should be considered sufficient to trigger requests for further data.

4. CEPA should be amended to include an explicit requirement that the Ministers must consider safe alternatives during assessments and management.

5. Section 73 of CEPA should be amended to allow government to delete substances from the DSL if they are no longer present in Canadian commerce. Any subsequent use of these substances would then be subject to the New Substances Notification requirements.

6. A new mechanism should be developed allowing government to track a DSL substance's type and quantity of use.

7. Substances that have met the criteria for categorization should be added to the list of chemicals reportable through the National Pollutant Release Inventory (NPRI).

3. Insufficient Mandatory Timelines

The problem

The risk assessment and risk management process in Canada is moving too slowly and lacks accountability. Problem chemicals continue to be legal for manufacture, use or import into the country. The time from initial concern to tangible action is too long. Perfluorooctane Sulfonate (PFOS), for instance, a by-product of stain repellants, was banned in the United States (with a few limited exemptions) in 2000, while Canada took until October 2004 to recommend it be listed as toxic and virtually eliminated. The assessment and recommendation have yet to be finalized.

The current situation

CEPA has very few mandatory timelines and deadlines. Where such mandatory deadlines exist, they have helped the government better accomplish its tasks. In particular, CEPA 1999 requires that within seven years the government complete the categorization exercise for the Domestic Substances List. This effort is nearing completion, on time for the September 2006 deadline.

Substances on the categorization list are required by section 74 to undergo a Screening Level Risk Assessment (SLRA) or screening assessment. There is no prescribed deadline for the completion of screening assessments of DSL substances.

Following the screening of a DSL substance, the Ministers of Environment and Health have three choices regarding the regulation of a substance; they may:

- take no further action on the substance, in which case the substance remains on the DSL and no regulatory action is taken;
- add the substance to the Priority Substances List; or
- add the substance to the List of Toxic Substances (subs. 77 (2)).

The categorization process is expected to identify about 4,000 substances as meeting the criteria in section 73. Although these substances will require a screening assessment and a decision on further assessment or action, the Act provides no guidance on how quickly this should take place, particularly for substances that are of the greatest concern.

Some priority-setting among these 4,000 substances has occurred within both Health Canada and Environment Canada to guide future work. They note that many of the worrisome substances are scarcely in use which should allow for relatively swift action to remove these substances from the DSL, although a mechanism in CEPA is required to allow for this efficiency measure (as recommended in the previous section).

Priority Substances List

The Priority Substances List (PSL) includes substances from the DSL that are to be assessed for toxicity on a priority basis (section 76). Once placed on the PSL, a substance must be assessed for toxicity within five years (although the CEPA ministers may further delay this assessment: section 78). Although the government has periodically chosen a number of substances from the PSL and undertaken a full assessment of these substances to ascertain whether they are toxic or capable of becoming toxic, only a small number of substances have undergone full assessments.

The baseline period of five years for assessment of PSL substances is too long, and should be shortened. CEPA also allows for this five-year deadline to be extended if the government decides more information is required.

Toxic Substances List

If a substance is determined to be CEPA-toxic, it is placed on the Toxic Substances List (TSL or Schedule 1 of CEPA). Once a substance is placed on the TSL, the Minister of the Environment has two years to develop preventive or control measures for reducing or eliminating the substance's release into the environment. Such measures may include regulations, guidelines or codes of practice, the requirement of a pollution prevention plan, or the requirement of an environmental emergency plan.

If a substance on the TSL is determined to be persistent, bioaccumulative and inherently toxic, and is generated primarily from human activity, CEPA requires that the government adopt measures to achieve the virtual elimination of the substance, as discussed in more detail in the next section.

Within two years after a substance has been declared CEPA-toxic and added to Schedule 1, the proposed management option (which may be a "regulation or other instrument") must be published in the *Canada Gazette* (subs. 91 (1)). Subsection 92 (1) gives the government an additional 18 months to confirm what "regulation or instrument" will be used – giving a total of 42 months for the "management"-planning stage alone. However, "if a material substantive change is required to be made" to the proposed regulation or instrument, the 18-month period may be further extended indefinitely.

CEPA requires a mandatory timeframe within which the chosen regulation or instrument must be put in place and implemented.

An assessed substance goes to the Governor in Council (cabinet) twice: once to approve the listing of the substance on the TSL (subs. 90 (1)), and a second time to approve any regulation that is proposed. Each time, there must be a recommendation by both Ministers. Despite the serious hazard that may be posed to the environment or to human health by a substance, there is no requirement for these approvals to be given in a timely fashion. The assessment decision should be purely scientific, and not involve a weighing of political considerations. The

requirement for cabinet approval of a listing decision in subsection 90 (1) should therefore be removed and this task performed by one or both of the CEPA ministers.

A number of assessment reports of CEPA-toxic substances have been completed over the years, each including recommendations for risk management actions and further study. The extent to which these recommendations have been fulfilled is not clear and not transparent to the public. Environment Canada raised this matter in 2005 in an evaluation report prepared as input to the CEPA review. The department notes that evidence is not available to demonstrate the effectiveness of the management measures taken to date on substances found to be CEPA toxic through the PSL process.[13]

New Substances

Substances that are new and therefore not listed on the DSL cannot be manufactured or imported into Canada until the Minister of the Environment has been notified, the applicant has provided all information that is required for an assessment regarding the substance's safety, a fee has been paid and the period for assessing the safety of the product has expired.

The New Substances Notification program requires government to evaluate industry submissions within specified timeframes, none longer than 90 days, depending mainly on the volume threshold and type of substance. The government can require further information, thus extending this time limitation, in order to complete its assessment. But even this power is too limited, as the further information can only be requested prior to the end of the assessment period.

Building in Accountability

In addition to the need for deadlines and timelines, there is a corresponding need to ensure they are met. Many of our recommendations have to do with incorporating deadlines into the statute to structure government activities. Others have to do with timelines for industry. While sanctions are necessary for industry non-compliance, government accountability is equally important.

First, government will need additional resources as well as greater internal discipline to meet new deadlines. The results of screening assessments, PSL assessment reports, and other documents developed in the process of chemicals management, need to be followed up. These reports often state the need for additional work to be done such as for environmental monitoring, health effects research, or the assessment of alternative technologies. The effective implementation of CEPA requires that the federal government track these details to ensure that data collection requirements are met, tasks are completed and any resulting problems addressed.

[13] Environment Canada (March 2005). *Formative Evaluation of CEPA 1999: Environment Canada.*

Recommendations

Recommendations 8-15 speak to the insertion of timelines and deadlines across the entire exercise of chemicals management. Additional deadlines concerning substances targeted for virtual elimination are noted in Recommendations 16 and 17.

8. Where "immediate action is required to deal with a significant danger to the environment or to human life or health", the CEPA ministers have the power in subs. 94 (1) to take such action by issuing an interim order. The order may include any provision that may be contained in a regulation made under subs. 93 (1). The making of such an order is subject to a number of procedural hurdles, and ceases to have effect unless it is approved by cabinet within 14 days after it is made. Greater use of this provision should be encouraged in order to address threats posed by the most toxic substances. Further investigation may be required to determine the greatest obstacles to more frequent use of this provision.

9. CEPA currently requires that following categorization, all substances, even those substances identified as having potentially dangerous properties, are subject to a "Screening Level Risk Assessment" (s. 74), before action is taken on them. In an amended CEPA, those substances identified through categorization as persistent, bioaccumulative *and* inherently toxic (PBiT) should be considered CEPA-toxic, unless toxicity data submitted by industry demonstrate no harm to human health and the environment. They should be added to Schedule 1 immediately, and a regulation or instrument implementing virtual elimination should be proposed within one year.

10. For persistent and inherently toxic (PiT) or bioaccumulative and inherently toxic (BiT) substances, the 500 highest priority (according to Environment Canada) eco-toxic and 100 highest priority (according to Health Canada) human health toxic substances should have:
    - a screening assessment within two years to determine CEPA-toxicity;
    - a management plan in place for CEPA-toxic substances in one more year; and
    - two more years for implementing the management plan.

11. Where a substance is to be assessed through CEPA provisions other than categorization, such as a recommendation by any person (subsection 76 (3)); information about severe restrictions or prohibitions of a substance by another jurisdiction (section 75); or a report by a company or other person (section 70)), CEPA should be amended to require:
    - a screening assessment within one year to determine CEPA-toxicity;
    - a management plan in place for CEPA-toxic substances in one more year; and
    - two more years for implementing the management plan.

    These suggested timelines could be tighter for a substance that the assessment suggests is of greater concern; for example, if the substance is a PBiT, the accelerated timelines recommended above would apply.

12. Useful ways of streamlining the assessment process include:
    - Reducing the two cabinet approvals to one: the requirement for cabinet approval of a listing decision in subsection 90 (1) should be removed. The decision to list a substance on the TSL, which is based on the results of an assessment, should be performed by one or both of the CEPA ministers, not by the full cabinet.
    - Reducing from five to two years the effective deadline for completing an assessment once a substance is on the Priority Substances List (subs. 78 (1)).

13. If substances are found to require a full Priority Substance List assessment following their screening assessment, there should be a mandatory requirement for proponents to provide the necessary data within a specified timeframe, and the ministers should be required to complete the assessment within four years of the substance being categorized.

14. After a substance has been through a full risk assessment, failure to provide data on a substance that is persistent or bioaccumulative and inherently toxic should result in automatic designation of the substance as CEPA-toxic, and phase-out of the substance should be required, including a sunset date after which the substance may no longer be manufactured, imported or used. Where there is a need for continued use of the substance, a two-year time limitation should be applied, with one allowable renewal.

15. Additional resources should be allocated to Health Canada and Environment Canada, in order to ensure the effective and accountable implementation of CEPA.

4. Virtual Elimination

The problem

CEPA has not been effective in eliminating the most dangerous substances. The virtual elimination provisions have not been used, and not even the persistent organic pollutants (POPs) under the Stockholm Convention covered by CEPA have been added to the list. This is despite Canada having agreed to virtually eliminate the most persistent and toxic substances as part of the *Canada - United States Strategy for the Virtual Elimination of Persistent Toxic Substances in the Great Lakes.* To date, only one substance (hexachlorobutadiene) has been proposed for virtual elimination in Canada.

The current situation

Canada and the United States agreed in Article II(a) of the *Great Lakes Water Quality Agreement* (GLWQA) that "...the discharge of any and all persistent toxic substances [should] be virtually eliminated" and agreed to develop programs and measures to implement the agreement. The means for achieving virtual elimination were to include "measures for the control of inputs of persistent toxic substances including control programs for their production, use, distribution,

and disposal..." (GLWQA, Article VI (k)). In response to the International Joint Commission's 1990 *Seventh Biennial Report on Great Lakes Water Quality*, both countries reaffirmed their commitment to promote implementation of the virtual elimination provisions in the GLWQA.

According to CEPA, substances are to be put on the virtual elimination list if they are persistent, bioaccumulative, toxic under CEPA, and released into the environment as a result of human activity. However, major barriers exist to implementing virtual elimination, with a number of technical steps that bog down the process. Consequently, only one substance has been proposed for elimination to date (this proposal was published in August 2003), and none has actually been added to the list.

The barriers to virtual elimination under CEPA arise from requirements incorporated into the Act that flow from the 1995 federal *Toxic Substances Management Policy*, including:

- The need to set a minimum Level of Quantification before a substance can be put on the list;
- The need to set a specific release limit; and
- Environment Canada's view of virtual elimination as a last resort rather than an essential part of the 1995 Toxic Substances Management Policy for substances that meet the criteria.

Because this view and definition of virtual elimination focus on minimizing release rather than eliminating the production and use of toxic substances, virtual elimination becomes a pollution control rather than a pollution prevention measure.

Recommendations

16. The definition of virtual elimination in CEPA should be consistent with the spirit of the Great Lakes Water Quality Agreement and the reports of the International Joint Commission, which are centred on eliminating inputs of persistent toxic chemicals, with actions rooted "in the philosophy of 'zero discharge'" The CEPA definition should be revised to include the cessation of the intentional production, use, release, export, distribution or import of a substance or classes of substances. Where a substance is produced as a by-product, virtual elimination should include changes to processes, practices, and substitution of materials or products to avoid the creation of the substance in question.

17. The requirement for a precise minimum level of quantification should be removed from the virtual elimination section. Rather, reasonable release limits to account for trace amounts should be applied.

5. Protecting the Great Lakes

The problem

Despite the importance and vulnerability of the Great Lakes basin, CEPA provides nothing to specifically protect the region. The Act also does not implement Canada's international agreements committing the government to the reduction of pollution in the basin and the elimination of persistent toxic substances. As a result, pollution in the Great Lakes continues to be worse than most of the rest of the country, and Canadian facilities are falling behind their U.S. counterparts in preventing toxic emissions.

The current situation

The Great Lakes are a national treasure, holding 18 percent of the world's supply of surface fresh water. Thirty percent of the Canadian population lives in the Great Lakes basin, some 25 percent of Canada's Gross National Product is generated there, and 58 percent of the industrial facilities reporting under the National Pollutant Release Inventory are located there.

Recognizing that pollution caused by persistent toxic substances was harming the Great Lakes ecosystem and posing risks to humans and wildlife, Canada and the United States signed the *Great Lakes Water Quality Agreement of 1978* (GLWQA), pledging to virtually eliminate persistent toxic substances in the region. In 1997 the parties agreed to the *Canada-United States Strategy for the Virtual Elimination of Toxic Substances in the Great Lakes*, in the spirit of implementing the GLWQA. The Great Lakes have thus been an international incubator for internationally important research and policy on toxic substances. With the official review of the Agreement currently underway, an opportunity exists to link CEPA more closely with the Agreement, especially its persistent toxic substances provisions. Also, Canada needs to keep up with recent US efforts in providing adequate resources for taking action.

Despite the Great Lakes' environmental importance, CEPA contains no express provisions requiring protection of the basin. CEPA does not reference the *Great Lakes Water Quality Agreement* or the virtual elimination strategy and so provides no mechanism for ensuring that the agreements are implemented. The Act fails to create any infrastructure within the federal government to explicitly protect the basin or to assist Canada in meeting its international commitments related to the Great Lakes.

There is also no specific federal monitoring of or reporting on the status of the environment in the Great Lakes. CEPA does not provide for an inventory of release data, health indicators or programs in the basin ecosystem.

The Great Lakes basin continues to be home to a major pollution problem. Air, water and land-based toxic substance releases are disproportionately high with nearly half of all toxic Canadian air pollution being emitted in the basin. The United States is doing a better job of protecting the watershed. As noted above, Canadian facilities in the Great Lakes basin emit 93 percent more

potentially cancer-causing air pollutants on a per-facility basis than U.S. plants, and almost four times the pollutants that can cause reproductive or developmental harm.[14]

Most importantly, action under CEPA and the Great Lakes Water Quality Agreement must be more closely connected. The departments, through a screening process, must identify substances that are used in the Great Lakes basin and that are carcinogenic, endocrine-disrupting, or pose particular threats to children's health. Mandatory action plans including timelines must then be developed within two years of identifying the substances, and then implemented.

Recommendations

18. A new Part of CEPA should be created to recognize areas that are environmentally important because they are both nationally or internationally significant, and because they are threatened by toxic pollution. This new Part would then be used to recognize the Great Lakes basin as deserving of special provisions.

19. As part of the Great Lakes section of CEPA, the Act should:
    - Contain a legislative commitment to implement the Great Lakes Water Quality Agreement;
    - Establish a Great Lakes coordinating office within the Government of Canada, responsible for coordinating federal Great Lakes programs and interjurisdictional programs;
    - Create a Great Lakes research consortium among universities and the governments of Canada, Ontario and Québec that would integrate and build upon current research into threats and stresses to the biological, physical and chemical integrity of the Great Lakes basin ecosystem, and have a mandate to implement pollution prevention, toxic use reduction and product substitution through technological innovation. The research would be highlighted and supported by the members and activities of the International Association for Great Lakes Research;
    - Fund the consortium through an ongoing, secure Great Lakes Research and Restoration Fund;
    - Develop specific requirements for monitoring both environmental conditions and the measures taken to address and improve them. This could be achieved through enhancements to the NPRI, and maintenance of an inventory of Great Lakes protection and restoration programs, including an inventory of investigations, prosecutions and convictions carried out in the basin under relevant legislation;
    - Require that substances used in the Great Lakes basin that are carcinogenic, endocrine-disrupting, or pose particular threats to children's health are identified and within two years, mandatory action plans for eliminating those substances (including timelines) are developed, then implemented.
    - Mandate reporting intended to highlight progress in protecting the basin, with an expert scientific panel struck to evaluate such efforts and report to Parliament;

[14] Pollution Watch, February 2006. Partners in Pollution: An Assessment of Continuing Canadian and United States Contributions to Great Lakes Pollution, p. 12.

- Set overall pollution prevention goals for the region on five- and ten-year timelines, with elimination goals and action plans for carcinogens and CEPA-toxic substances, and reduction goals for particulates and smog precursors.

6. Consumer Products

The problem

The environmental and human health impacts of consumer products are not adequately covered by CEPA. In only rare circumstances do regulations created under the *Hazardous Products Act* place any limits on the use of CEPA-toxic substances in consumer products. Otherwise, substances deemed to be CEPA-toxic can be freely incorporated into products, either where the products are manufactured domestically, or imported into Canada.

The current situation

Although section 93 of CEPA can be used to control the environmental impacts of consumer products, it has not been used for this purpose.

Written in the 1960s, the *Hazardous Products Act* (HPA) is structured to address limited cases of acute toxicity from a very limited number of highly hazardous substances, as well as dangers of injury or death posed by consumer products. The law addresses hazardous situations primarily by means of product-specific, sometimes category-wide, regulations, though often only after some serious poisoning, serious injury or death has occurred. The HPA addresses some aspects of longer-term, chronic toxicity but only for a small list of substances and then, only in product-specific regulations, as these are deemed necessary.

Aside from the very limited list of highly toxic substances addressed by the HPA, products that contain harmful substances and potentially release them into the environment are widely tolerated. A product or class of products may contain a substance that has been determined to be toxic under CEPA, unless a specific regulation has been made that addresses that product or class of products. Regulations controlling or prohibiting the use of CEPA-toxic substances in products are extremely rare in either act.

Lead, for example, was deemed CEPA-toxic in 1990, without the need for an assessment report. It was banned from gasoline at the same time on the basis of extensive understanding of the health impacts in children at very low exposure levels. Nevertheless, a steady stream of almost entirely imported consumer products, often containing very dangerous levels of lead has continued to be sold in Canada since that time.

Throughout the 1990s, lead was found at dangerous levels in sidewalk chalk, crayons, painted zippers on children's clothing, plastic mini-blinds and in widely available, inexpensive jewellery

and trinkets. Health Canada undertook a "Lead Reduction Strategy" in 1997 to address this problem. After more than four years of consultation (and little discernible strategy), the "urgency" of the jewellery issue prompted action to create a jewellery-specific regulation – which took another three years to develop.

The jewellery regulation focuses only on "children's jewellery" and does not address the problem of widely available leaded costume jewellery, and other trinkets like key chain fobs and lapel pins made of lead. Confirming fears about economic concerns trumping health concerns, the regulatory impact statement argued that banning lead in costume jewellery would present an economic hardship to that industry. Meanwhile, leaded products add a toxic burden to the municipal waste stream which, if incinerated, adds directly to airborne lead emissions.

The HPA does not provide the power to order dangerous products off the shelves. Such a power exists for drugs and other medical products, and for pesticides, but not for consumer products containing toxic substances. The example of this lead regulation is the tip of an iceberg. Hundreds or even thousands of chemicals in consumer products require regulatory action. The failure of the HPA to address lead, arguably among the most extensively studied toxic substances, underscores the inadequacy of this law to address many other substances in consumer products in need of urgent attention.

Recommendations

20. CEPA should be amended to include adequate legislative authority to prohibit and/or regulate toxic substances found in consumer products, both for the environmental and human health impacts. The effect of the new provisions, in keeping with the "materials use" approach described below, should be to prohibit the use of toxic substances in products, and to control their subsequent release where outright prohibition is not possible.

21. CEPA management of toxic substances in consumer products should follow a "materials use" approach. When a substance is added to the List of Toxic Substances, its use in products should be banned, with the only exceptions being essential uses where there are no reasonable alternatives. A proponent of such a product wishing to except the product from the ban could apply for an exception. In order for the exception to be granted, the proponent would need to explain to the Ministers or their designates, in a publicly accessible process, why no alternative to or lower quantity or concentration of the substance was reasonably possible. Other uses would simply not be allowed either domestically or in imported products. For substances that are in widespread use, such as CO2, the Minister should have the authority to grant an exemption for that substance. Such a "materials use" policy would be far more effective and efficient than regulating product by product.

22. CEPA should give the Ministers of Health Canada and Environment Canada authority to reject products containing or emitting substances that are hazardous to health or the environment, including the power to recall products from retail and wholesale operations.

23. CEPA should be amended to require consumer product warning labels notifying the public if a product contains substances known to be carcinogenic or toxic to human reproduction and development, according to recognized lists such as Proposition 65 in the state of California and the International Agency for Research on Cancer.

7. Precaution and the Burden of Proof

The Problem

Although CEPA requires the federal government to apply the precautionary principle, more weight is given in practice to social, economic and legal considerations than to protecting health or the environment. The Act does not operationalize the principle by setting out how it shall be explicitly used at every stage of decision-making processes. A key means of putting the precautionary principle into practice is reversing the burden of proof about chemical hazards, called a reverse-onus approach. However, in practice, the burden of proof rests largely with the government, and by extension the Canadian public, to demonstrate chemical hazards, while multiple chemical exposures of uncertain toxicity continue.

The current situation

The precautionary principle is mentioned four times in CEPA 1999:

- In the Preamble;
- In the Administrative Duties section, requiring the Government of Canada to exercise its powers in a manner that applies the precautionary principle;
- In the section establishing and setting out the duties of the National Advisory Committee ("in giving its advice and recommendations, the Committee shall use the precautionary principle": subs. 6 (1.1)); and
- In s. 76.1 (while conducting and interpreting the results of certain screenings and assessments, the Ministers of Health and Environment "shall apply a weight of evidence approach and the precautionary principle.")

The Act is part of a larger federal government framework based on "risk," however: it is a framework that emphasizes risk assessment, risk management and risk communication over early avoidance of hazards. This framework also tends to give more weight to "legal risk" and social and economic considerations than to environmental and health hazards. In addition, existing broader federal policies on "risk" and "precaution," have the effect of allocating greater weight to economic and competitiveness considerations than to human health and environmental protection considerations.

Precaution can be implemented in part by tailoring discretionary provisions so that decisions must be made that emphasize preventing harm, rather than tolerating risks. Such explicit precautionary language should be added at key stages of the CEPA toxic substance management process.

During the categorization exercise, for example, the burden of proof is now on the government to show that substances are toxic under CEPA before regulatory or other management actions are taken. While the agencies can request data from industry, this power is not extensively used and more important, environmental exposure to these existing substances is ongoing while any evaluations occur.

Where categorization indicates that a substance is persistent, bioaccumulative and inherently toxic (PBit), industry should be required to demonstrate why the substance should not be considered CEPA-toxic, thus reversing the onus in considering persistence, bioaccumulation and inherent toxicity. Even greater environmental and health protection would be afforded if the additional consideration of health effects, noted in the recommendations in Section 3 above regarding categorization and assessment of substances, were implemented.

Substances other than PBiTs that are identified through categorization as requiring priority assessment should be considered CEPA-toxic unless data demonstrating otherwise are provided by the proponent. A similar explicit onus should be placed on proponents of substances that are prohibited or severely restricted in other jurisdictions.

In contrast to the situation with categorizing existing substances, the New Substances Notification program does require that a small set of data be submitted, before a chemical not listed on the Domestic Substances List can be newly introduced to the Canadian market.

Compared to the revised and soon to be promulgated *Pest Control Products Act* (PCPA), CEPA makes no explicit mention of where the burden of proof lies. The new PCPA places the onus on manufacturers to demonstrate acceptable risk of pesticide products before they can be put on the market.

The coming *Registration, Evaluation and Authorization of Chemicals* (REACH) Regulation in Europe will place the onus on manufacturers by requiring data for anything that is on the market. Since Europe is the largest chemicals market in the world, Canadian and other internationally-situated companies will be meeting this standard and could do the same for the Canadian market. It should not be considered onerous or unreasonable to modernize and harmonize toxic substances regulation under CEPA in a manner similar to that already done for pesticides in the revised PCPA.

Recommendations

24. CEPA needs stronger authority to use the precautionary principle to ban or significantly reduce the most dangerous substances. Such authority would better enable the

departments to eliminate or reduce dangerous risks in the absence of full scientific certainty about toxic substances. Explicit precautionary language should be added at key stages of the CEPA toxic substance management process.

25. The burden of demonstrating safety should be on those wishing to introduce new chemicals or re-introduce banned chemicals, but only once they could demonstrate safety after a comprehensive evaluation. The Authorization process under REACH and portions of the revised registration regime of the *Pest Control Products Act* offer examples of this approach.

26. Existing language that limits actions only to those that are "cost-effective" should be removed from the definition of the precautionary principle, in order to better place the emphasis on protecting the environment and human health.

27. The CEPA review should also consider overarching federal government policies that deal with risk management and regulation-making and their impact on CEPA implementation.

28. Industry should be required to demonstrate why a substance that is persistent, bioaccumulative and inherently toxic (PBiT) should not be considered CEPA-toxic. Substances other than PBiTs that are identified through categorization as requiring priority assessment should be considered CEPA-toxic unless data demonstrating otherwise are provided by the proponent. A similar explicit onus should be placed on proponents of substances that are prohibited or severely restricted in other jurisdictions.

8. Access to Information and Public Participation

The problem

CEPA is inadequate in providing information to the public on substances in our environment and the decisions made involving them. This limits public access to information as well as opportunities for public participation. Though citizens have the right to sue under the Act, CEPA creates too many barriers to make the provisions useful.

The current situation

Part 2 of CEPA 1999 includes provisions for an electronic "Environmental Registry" (called the CEPA Registry). Although the Act does not require it, the registry is electronic and found on Environment Canada's website, facilitating access to current and archived policy and regulatory proposals, as well as permits/approvals for transboundary movements of hazardous waste and hazardous recyclable materials, for disposal at sea, and for manufacturing, importing or exporting ozone-depleting substances.

In order to better involve the public in environmental protection decision-making, the scope of the CEPA registry should be expanded to match that of the Ontario Environmental Registry. For instance, information gathered on substances covered by CEPA should be included. The Minister of the Environment's current powers in section 46 of CEPA to create inventories of information gathered on substances and relevant science, should be tightened.

Opportunities for public involvement also need to be enhanced. CEPA is weak on opportunities for involvement in the granting of permits (e.g. for disposal at sea) and of waivers (e.g. under the new substances provisions or from vehicle or engine emission standards).

The main provisions in CEPA concerning confidentiality of business information are found in sections 313 to 321. More specific rules for the submission of information appear in different regulations and guidance documents issued under the act.[15] The existence of the various rules makes it difficult to assess the balance that is struck between confidentiality and the need for information about potentially hazardous substances to be made public.

Section 313 of CEPA allows a person to file a request that information be treated as confidential; the request must be made in writing and contain any supplementary information that may be prescribed.

Section 315 provides for "public interest disclosure", where public interest is defined in terms of "public health, public safety or the protection of the environment." The possibility of such disclosure is subject to an onerous test: "the public interest in the disclosure [must] *clearly outweigh* in importance (i) *any material financial loss or prejudice to the competitive position* of the person who provided the information … and (ii) any damage to the privacy, reputation or human dignity of any individual that may result from the disclosure" (emphasis added).

Although – and perhaps because – information on the use of this provision is not available, it seems likely that its application tends overwhelmingly in favour of maintaining confidentiality. The lack of reporting on the use of confidentiality provisions also makes it difficult to assess them.

The disclosure provisions do not specify to whom disclosure will be made, and in what circumstances. For example, subsection 316 (1) deals with sharing of otherwise confidential information with other governments. This provision, at least, does not appear to contemplate sharing of information more publicly.

In terms of citizens' right to sue under CEPA 1999, the Act created a new, statutory cause of action called an "Environmental Protection Action" (ss. 22-38). However, a series of obstacles to launching such an action makes it highly unlikely that the provisions will ever be used. Actions are limited to instances where the Minister has "failed to conduct an investigation and report within a reasonable time," or to situations where the Minister's response to the investigation was "unreasonable." In addition, "significant harm to the environment" must have already occurred, a significant risk of harm being inadequate. Finally, an action cannot be

[15] See for example, Environment Canada, Guidelines for the Notification and Testing of New Substances: Organisms (2001) in Section 8: Confidential Information, at pp. 89-93.

brought if it can be argued that the alleged conduct was taken "to correct or mitigate harm or the risk of harm to the environment or to human, animal or plant life or health."

The CEPA Annual Reports published to date list no information on Environmental Protection Actions launched. As public interest advocates predicted when the current Environmental Protection Action wording was proposed for CEPA 1999, the requirements have proven too onerous for the provisions to be used.

CEPA establishes a National Advisory Committee to advise "on regulations proposed to be made under subsection 93 (1)," "on a cooperative, coordinated intergovernmental approach for the management of toxic substances" and "on other environmental matters that are of mutual interest to the Government of Canada and other governments …" (paras. 6 (1) (a)-(c)). The deliberations of the Committee are neither reported nor made public. Only a very brief summary of the Committee's activities are printed in the CEPA Annual Reports. More transparency is needed into the role and activities of this Committee.

Recommendations

29. The Government of Canada should be required to maintain a publicly-available inventory of information gathered (e.g. relating to the properties of substances) under CEPA, and to publish it on the CEPA Registry.

30. The environmental registry should inform the public of
    - Notices, including notices of objection;
    - Any proposal for the issuance of an approval, regulation, revision or revocation of a regulation, order, or any policy; and
    - Any environmental protection actions under section 22.

31. New provisions should be included in CEPA allowing for the publication of notices of proposals for decisions, and notices offering opportunities for public comment on those impending decisions.

32. The committee should call evidence and review the actual use of confidentiality claims under CEPA, in order to determine how and to what extent the provisions have been used to protect "the interest of public health, public safety or the protection of the environment," and whether the provisions need to be strengthened in order to enhance the information available to the public.

33. The preconditions to bringing an environmental protection action should be removed.

34. More public information on the activities of the National Advisory Committee, and public access to its meetings, is required in order to enhance public involvement in decision-making.