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Chair

Mr. Bob Mills

Standing Committee on Environment and Sustainable Development

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● (1530)

[*English*]

The Chair (Mr. Bob Mills (Red Deer, CPC)): I call the committee to order.

First of all, I'd like to welcome our guests, our panel today. I realize you were notified on rather short notice, so thank you so much for being here.

Again, thank you to the health and environment departments for being here. Feel free to jump in where necessary. I know our people here will involve you.

I believe we'll follow the order of witnesses as they're found on the agenda. I would ask you to try to keep your comments to ten minutes. Then we'll go through the first round, which will involve our members having a ten-minute intervention, and the second round would be a five-minute intervention. I would ask you to keep your answers as brief as possible so that the maximum number of people can ask questions.

We'll begin with Mr. Michel Gaudet.

Mr. Michel Gaudet (Allergy and Environmental Health Association of Quebec): Respected chair and members of the Standing Committee on Environment and Sustainable Development, on behalf of the Allergy and Environmental Health Association of Quebec, I thank you for the opportunity to provide public comment on CEPA.

AEHAQ is a non-profit organization created to secure the facilities and services needed to enhance the lives of people suffering from environmental sensitivities. Since the enactment of CEPA in 1999, several reports on body burden testing for chemicals in the U.S. and Canada have revealed that humans carry an assortment of chemicals in their bodies. The synthetic chemical burden has been measured in all parts of the body, and some of them can linger for decades in body fat and be released during lactation, pregnancy, weight loss, and stress. While some chemicals are known to cause some diseases, complete information is not available on most of them and the synergistic effect of carrying this load is unknown. Also unknown is the effect that this will have on future generations.

The recent coverage of this widespread pollution of the population has been published in the October 2006 issue of *National Geographic*. This mounting crisis is being exposed and there's a real concern that, without its knowledge or permission, the public has been part of a chemical experiment in which no records have been kept.

Many chemicals are known to initiate or trigger chemical sensitivities, and this phenomenon is known to the pesticide industry. In a preliminary study, people who suffer from ES have been shown to have genes that are less able to detoxify medication and environmental chemicals, and therefore may be genetically more susceptible to adverse effect from exposure to relatively low levels of environmental chemicals.

ES is a chronic, multi-system disorder that can lead to disability. ES can occur when people become sensitive to substances or phenomena in their everyday environment at levels well below what would be considered to be acceptable to the general population. In part, sensitivity reactions can be triggered by scented and cleaning products, solvents, volatile compounds, petrochemicals, and so on.

According to the Nova Scotia Environmental Health Centre, sensitivity reactions can result in “a range of disorders marked by debilitating symptoms affecting multiple organ systems. Frequency and/or severity of these symptoms are made worse by subsequent exposures, even at very low doses to a wider range of chemicals and irritants”.

People suffering from ES often identify acute or chronic exposures to chemicals as initiating their condition. A recent survey by AEHAQ shows that a majority of the respondents identified chemical exposure as a cause of ES.

Due to an increasingly contaminated environment, the number of people with environmental sensitivity is steadily increasing. According to a study published in the peer-reviewed journal *Environmental Health Perspectives*, 12.6% of the population suffers from MCS. Of these, 13.7% or 1.8% of the population are affected severely enough to lose their jobs. *EHP* is the journal of the National Institute of Environmental Health Sciences, part of the U.S. Department of Health and Human Services. Extrapolated to Canada, around four million Canadians would suffer from environmental sensitivities and around half a million would be unable to work.

Their report in 2000 estimated that one in eight Canadian workers was significantly impaired or absent from work due to chemicals and mould in their workplace. Lost productivity cost the Canadian economy $10 billion a year. Misdiagnosis, ineffective and inappropriate treatment, and disability payments also cost Canadians billions of dollars a year. A million Canadians were underemployed and needed to renovate their homes in order to deal with sensitivities, half a million were unemployed, and thousands were homeless. Family breakup and suicide sometimes ensued.

The effect of environmental sensitivities can be overwhelming. Productive people can become unable to tolerate offices, homes, schools, hospitals, public places. Many lose their jobs. Some become homeless. All too often retirement savings are depleted and debts are incurred in an attempt to create safe living conditions and to fund the costs of treatment. Sadly, despite skills and education, many affected individuals eventually find themselves living on social assistance. Many become socially isolated as they are forced to retreat from places and activities they love.

However, individuals with sensitivities improve significantly once they find a safe toxin-free environment in which to live and work. According to a study headed by the Canada Mortgage and Housing Corporation, 86% of people with environmental sensitivities improve significantly after access to adequate housing. Some who had a bleak prognosis almost completely recovered.

● (1535)

Many studies demonstrate that the most effective management strategy for ES is avoidance of further chemical exposures. This means breathing clean air, drinking clean water, eating organic food, and using only non-toxic products for all aspects of living. Members of AEHAQ inform us that this is close to impossible to achieve in this chemical world. There is literally no place to hide.

Therefore, AEHAQ urges the committee to develop a strong and responsible CEPA, since it is pivotal in managing and avoiding the development of environmental sensitivities. AEHAQ does not have the resources to match its recommendations with each point in CEPA. A detailed list of recommendations is provided in the AEHAQ submission.

This is a summary of the recommendations:

To recognize and include ES sufferers as a vulnerable segment of the population.

The precautionary principle must be enshrined in every part of the act so that Canadians are protected from toxic exposures in the home, workplace, and community.

Only chemicals and pesticides proven to be safe for the most vulnerable segments of the population should be approved and allowed for use in Canada. All Canadians should have the health benefit of using only non-toxic products for everyday living. Industry must be given a maximum of one year to produce only non-toxic products.

Legislation coupled with education is necessary to inform the public regarding non-toxic products.

CEPA must set standards for ecological products, just as standards are set for organic farming and ecological pest control.

Industry must label all chemicals present in all products and the negative health effects in clear layman's terms that can be easily understood by the public, just as they are required to do when advertising medications. Labelling of products must be mandatory, and it must include the mention of sensitizers, carcinogens, mutagens, hormone disruptors and so on.

CEPA must include the ability to require random testing of products on the shelf. Mislabelling must result in heavy fines and immediate removal of the product from the shelves.

Proof of safety for chemicals must be carried out in a very short timeframe. The present timeframes for each stage in the process to establish safety of a chemical are far too long.

In terms of reversal of onus, the obligation to prove that manufactured products are completely safe for human health and the environment must rest squarely with the industry.

Testing must encompass all aspects of toxicity, and it must include the synergistic effect of mixtures in products.

The public must be informed when less toxic alternatives become available, and the toxic materials must be removed from the shelves immediately.

There must be immediate removal of toxic chemicals from the shelves as soon as a risk has been established. The public must immediately be informed so that products in the household or workplace may be disposed of appropriately.

Revenue generated from fines should be used to care for people who suffer from ES. This will include safe, chemical-free, adequate, low-cost housing; rehabilitation; financing for groups who care for ES sufferers; promotion of programs for health protection through avoidance of toxins; and subsidizing safe alternatives to toxic products.

There should be adequate air advisories: listing of the chemicals present inside buildings and commercial establishments.

The national advisory committee established by CEPA must have ENGOs as participants, especially those that represent vulnerable groups. Proceedings of this committee must be available to the public.

In terms of transparency, all data and records on chemical production, distribution, body burden, adverse health effects, and environmental degradation reporting must be made easily available to the public. Canadians have the right to know what is being used in their homes, workplaces, communities, and their environment. This will allow people to make a connection between exposure and ill health, and to report such effects to the Government.

Complaints about a product or chemical should result in immediate action towards removal and testing, in that order. Human health and the environment should always take precedence over corporate interests.

Canadians are becoming more acutely aware of the hazards of chemicals in their environment. They look forward to a strong CEPA geared only towards health protection.

AEHAQ urges the Standing Committee On Environment and Sustainable Development to mention in its CEPA report to Parliament that environmental sensitivities or multiple chemical sensitivities are an issue that is being raised by the public as a significantly increasing concern, that it affects and disables numerous Canadians through toxic chemical and environmental injury from unwanted and often hidden exposures, and that ES/MCS is one of many adverse effects on Canadians resulting from chemical exposures and resultant injury.

Thank you. *Merci.*

● (1540)

The Chair: Thank you very much.

I believe the next person is Kathleen Cooper.

Mrs. Kathleen Cooper (Researcher, Canadian Environmental Law Association): Good afternoon. My name is Kathleen Cooper and I'm senior researcher with the Canadian Environmental Law Association. I'm also chair of the coordinating committee and the policy committee of the Canadian Partnership for Children's Health and Environment, which is a partnership of public health, environmental, and child-focused organizations established to address the special vulnerability of children to toxic substances. You can see the member organizations of the partnership on the back of the brochure I distributed.

I'm going to run through some overheads drawn from the document called *Child Health and The Environment—A Primer*. I've provided some copies of it today, and if there aren't enough I can provide more. This document is intended to help the media, the public, service providers, and policy-makers such as you in your understanding of what is a very large and complex topic. It's further summarized in the brochure, which is focused on what parents can do to avoid key exposure risks.

We've prepared these materials for several reasons. First, among the groups and the partnership we needed to improve our understanding of a very large field to decide which concerns are greatest and where we should focus our attention. Second, we saw a need to raise public awareness about what can often be hidden exposures to toxic substances. Third, we saw a corresponding need for greater public awareness to enable public participation in discussions like these today about policy changes that are necessary to address these risks.

Our partnership is in year two of a multi-year campaign to raise this awareness, with 10,000 copies of the primer in print and over 200,000 brochures distributed across Canada. These bilingual resources are also available online. We expect their popularity will continue as awareness about these issues continues to increase.

I will discuss some key points about our findings and our work and conclude with some policy recommendations from the partnership, adding more detail from the perspective of further work within my own organization. I thank the technicians once again for letting me set this up on very short notice.

One of the key concepts about risks to children is their greater vulnerability, especially in the womb. This is a notion of windows of vulnerability. You'll be familiar with the old saying that the dose makes the poison. While this is often true, children's environmental health adds the element of timing. For example, an exposure to organic solvents, lead, or mercury that would not harm an adult can create very serious consequences during sensitive stages of fetal development. Throughout pregnancy, all the major systems of the body are developing. The placenta does not block the entry of most toxic substances. The fetus will share the mother's body burden of chemicals. Many of the organs and systems of the body are still immature at birth and continue to develop during infancy.

In fact, development in some systems continues for many years. The lungs and brain continue to develop until the end of adolescence. The years just before and during puberty are times of vulnerability in the reproductive system. Evidence points to chemical exposures both in the womb and during early puberty that may contribute to breast cancer later in life. As this illustration shows, it is important to remember that at all times across the human population a window of vulnerability is always open.

As I mentioned, one purpose of our research over the last six years was to write educational materials from a better understanding of this very large topic. The scale and seriousness of this topic can be alarming and we don't want to unnecessarily scare people. We ask ourselves which health impacts and which exposures matter the most, what can individuals do in response, and what are the necessary policy responses?

One way to set these priorities is to focus on health impacts where large numbers of children are affected. This overhead summarizes the health concerns and body systems or developmental processes of concern. You will already be aware of the concerns of asthma and other respiratory impacts. 12% of children in Canada have physician-diagnosed asthma. That's a fourfold increase from the early 1980s. Links to air pollution as a contributing factor are well established.

Impacts on brain development are of particular concern. We know that about 25% of Canadian children have one or more learning or behavioural problems. More research is needed to know whether or how much environmental contaminants contribute to these large numbers. We do know that children are routinely exposed to low levels of chemicals that are suspected of being toxic to the developing brain. We have to ask ourselves, what kinds of chances are we taking here?

● (1545)

Cancer is another area of significant concern. Fortunately, cancer in children is very rare, but it is the leading cause of illness-related death in children over the age of one. However, in young adults in Canada—that's age 20 to 44—several cancers are rising rapidly, often at sites in the endocrine system. And of course we continue to experience an epidemic of breast cancer, also an endocrine site. The sensitivity of early life stages to chemical exposures are probably involved in the onset of these cancers in young adults.

Reproductive and developmental impacts are associated directly with some contaminants or may be mediated through impacts on the endocrine system. There are concerns about impacts on the immune system. And finally, there are contaminants of concern associated with multiple health effects, such as lead, mercury, phthalates, PBDEs, some pesticides, etc. Those are the ones of greatest concern and needing our most urgent attention. It's important to recognize that for any of these health end points or for good health in general, many factors are at work, often described as the determinants of health. Environmental factors are one of the determinants of health.

Our knowledge is strongest for respiratory impacts. For the other health effects, clear associations can be drawn for only a small number of substances. However, we know hundreds, in fact thousands, of contaminants are suspected in some or several of the health impacts of concern in children, but we don't have complete information. What we do know, and continue to find out, is deeply troubling.

So which exposures matter most? That's another question we had for ourselves. This illustration shows the many ways that the fetus and child are exposed to environmental contaminants. Another aspect of the greater vulnerability of children is that we know they are more highly exposed than adults. For the health impacts of concern for children, we concluded that exposures of most concern are in both outdoor and indoor air, in food, and in consumer products. There's a lot of overlap in consumer products, because exposures in indoor air and in food can often originate from chemicals in consumer products. Indoor dust also appears to be a significant pathway, again often originating from toxic substances that are inadequately or completely unregulated in consumer products.

To illustrate some of these points, I want to talk about an example that you may be familiar with. This graph illustrates trend lines of chemicals in breast milk in Sweden since the 1970s. There are three points I'd like to make about this graph.

Sweden has conducted national bio-monitoring of breast milk since the 1970s—we should too—along with other bio-monitoring of chemicals in blood and urine. Statistics Canada plans to start a study in a few months. It should be an ongoing biannual review, not a single-year study, to be able to look at exactly these kinds of trend lines. The second thing you can see in this illustration is the impact of regulation. The levels of PCBs and the metabolite of DDT dropped in the 1970s following the decision to discontinue and ban their use. And you can see the trend line for PBDEs, the brominated flame retardants. Once use started to increase in the early 1980s, so did the contaminant levels in breast milk. These breast milk data informed the regulatory process. When they saw how fast these levels were rising, they swiftly banned two of the most widely used commercial mixtures of PBDEs, and following that ban, the breast milk levels began to drop. You can see the drop in the late 1990s. The final thing to notice in this graph is that 30 years later, even though levels continue to drop, DDT and PCBs are still contaminating breast milk. Like PBDEs, they are persistent as well as highly toxic, and that is why they had to be banned.

In Canada now, 10 years after Sweden took this regulatory action on PBDEs, we have PBDE levels in breast milk that are five to ten times higher than we're seeing in Sweden following this regulatory action. The Canadian state of the science report on PBDEs is now two years old and it's based on out-of-date science. The risk management strategy proposed under CEPA for these chemicals, and currently the subject of consultation, will have us talk about this problem in this country for another two years at least. Then we will consult further on passing regulations to ban PBDE mixtures that were already discontinued two years ago by major U.S.-based manufacturers. Right now, Sweden and other progressive European countries are seeking to ban the rest of the problem. They want to ban the deck of PBDEs that are still in production. But in Canada, in our risk management strategy we are not going to address what is essentially the remaining lion's share of the problem.

● (1550)

It's frustrating to read a document like this, because it simply enshrines the status quo. It sets a minimal or ineffective target that can easily be met already, and the rest of the problem remains unaddressed. In your actions to revise CEPA, you need to do something about this recurring problem with the way we regulate chemicals in Canada, and I can point to other examples in discussion.

I should close off with the policy recommendations, so what I've summarized on these slides are the recommendations that we agreed to within the partnership.

The first one has to do with the progressive reduction and elimination of child poverty. Again, this is about large numbers of children. One in five children in Canada lives in poverty, another one of the determinants of health. It's well established that poverty can contribute to significantly greater exposure to environmental contaminants, so the elimination of child poverty will improve their exposure situation.

The second and third recommendations have to do with calls for research. First, we need more research and related policy action to promote safer, non-toxic alternatives to toxic chemicals and pesticides. And it's important that you support other calls for significant increases in Canadian research and monitoring within—a couple of examples are noted here—bio-monitoring and a Canadian longitudinal study similar to the U.S. national children's study.

The final four recommendations have to do with changes in CEPA and associated policy for its implementation. These are general statements about increasing the focus on toxic and smog-forming air pollution and addressing the gap in the regulation of toxic substances and consumer products. We are also calling for mandatory, not discretionary evaluation of all potentially hazardous substances for their impacts on the developing brain.

All of these recommendations, and particularly the final one, I hope can be a part of further discussion with you today. Most of them are elaborated upon in detail in our submission to this committee from June 2006.

To conclude, I would like to point out that in Canada we have just been through—which I'm sure you are aware—a multi-year effort to revise the Pest Control Products Act. In your deliberations about CEPA, I urge you to incorporate into CEPA at least the same level of protection for children that we have now in Pest Control Products Act. That law now includes several specific requirements for considering children's health, and it also includes an important aspect of putting the precautionary principle into practice in that it specifically incorporates the principle of reverse onus: where a company seeks to register a pesticide, they must first demonstrate that their products will not cause harm prior to obtaining a registration to use a pesticide in Canada.

That's probably at least 10 minutes, and I should stop there. Thank you very much for your time.

The Chair: Thank you very much. Actually, you were at 13 minutes and 14 seconds.

I would ask you to try to keep it to 10 minutes so that we can stay on schedule and get the maximum number of questions.

Our next speaker is Inka Milewski from the Conservation Council of New Brunswick.

Mrs. Inka Milewski (Science Adviser, Conservation Council of New Brunswick Inc.): Thank you, Mr. Chairman.

My name is Inka Milewski and I'm the science adviser for the Conservation Council of New Brunswick, one of the three oldest environmental groups in Canada. We are a membership-based organization.

With respect to the topic today, vulnerable ecosystems and vulnerable populations, the Conservation Council believes there are two blind spots in CEPA. One is the lack of regulations for nutrient discharges to coastal waters, and the other is the lack of nationally binding standards on contaminants in soil, sediment, and water for populations living in the footprint of industrial activity.

I'm going to address each of these separately. In the first instance, that of coastal ecosystems and the need for regulations of nutrient releases, the Conservation Council has been preparing briefs on this matter for standing committees on the environment for almost 10 years, so once again I'm going to bring it up in the hope that we might get some action.

Since 1990, world experts on marine pollution have declared nutrients, specifically nitrogen compounds, the most damaging class of pollutants to the marine environment. There is no scientific dispute about the harmful effects of excessive nutrient loading on coastal waters. Unchecked release of nutrients from municipal sewage plants, pulp and paper mills, fish plants, marine aquaculture operations and intensive livestock operations can trigger a series of ecological responses that ultimately result in oxygen-starved dead zones, causing massive fish kills and the transformation of complex and diverse coastal habitats into barren seascapes dominated by a few species. In 2001 a report on the state of the world's oceans by UNEP, the United Nations Environment Programme, identified 50 dead zones worldwide. In 2004 the number went up to 150 and in 2006 that number, as just reported last week, is up to 200; there are 200 dead zones in coastal waters around the world.

Our marine waters are not immune from this phenomenon. In P.E.I. episodes of oxygen starvation and subsequent fish kills due to nutrient loading from agricultural runoff are reported annually at 18 to 20 sites around the province. In New Brunswick a study in 2002 by researchers from Dalhousie University and the Conservation Council of New Brunswick found that of ten estuaries we studied in northern and eastern New Brunswick, seven exhibited moderate to severe symptoms of excessive nutrient loading. Many coastal areas in the Quoddy region on the Bay of Fundy also show symptoms of nutrient loading, especially in the vicinity of point sources such as aquaculture operations.

Currently CEPA is silent on the problem of nutrient releases to the marine environment. Based on our analysis—which we sent in 2004 and 2006, and which you should also have in May—CEPA is the appropriate vehicle to regulate nutrients. Amendments can be made to the nutrient section—part 7, division 1, sections 116 to 199—to accommodate nitrogen compounds such as ammonia, nitrates and nitrites. Ammonia is currently on CEPA's priority substance list, and its release from various point sources represents a significant portion of the nitrogen or nutrients loaded into coastal ecosystems.

The amendment to part 7 would extend the current powers of the Governor in Council to include nutrients other than phosphates. Phosphates are nutrients that are limiting in freshwater systems, but in marine systems it is the nitrogen compounds. Limits could be placed on the concentration of nitrogen and effluent in emissions, or the minister could establish total maximum daily load requirements for a water body, as is done in the United States, and the provinces could be directed to allocate them by individual user.

The Government of Canada must act quickly to control nutrient releases to coastal waters, where 75% of all commercial species live. The report released last week in the journal *Science* predicting the total collapse of the commercial food fishery by the year 2048 if nothing is done to control overfishing, habitat destruction and pollution—specifically nutrient loading—should be all the evidence the government needs to begin controlling nutrient releases.

On the second issue, that of protecting vulnerable populations within the footprint of industry, in our view vulnerable populations are those people living in the shadow or footprint of industrial operations, such as metal smelters, petrochemical refineries, coal-fired power plants, waste incinerators and so on. People living closest to pollution sources are known to be at higher risk of exposure than those living some distance away. Many of the pollutants released, such as metals, persist and accumulate in soil, then bioaccumulate, or bio-magnify, within plants and animals that are subsequently consumed by people living in the area.

● (1555)

While CEPA does set emissions standards on a range of pollutants, it does not address the ongoing accumulation of these pollutants in the environment. That aspect of environmental protection is thought to be covered by other agencies such as Health Canada and the Canadian Food Inspection Agency. Health Canada and the Canadian Food Inspection Agency have developed some guidelines, not regulations, for safe levels of some contaminants in some food products. The Canadian Council of Ministers of the Environment, the CCME, has established non-enforceable, voluntary guidelines for pollutants in soils, sediments, and water. These are applied at the discretion of the provinces.

Enforceable limits on pollutants in soil, sediment, and water are needed to protect people living in close proximity to industrial activity. They are more vulnerable than people living further away. The example of Belledune, New Brunswick, illustrates this point. I think I sent earlier a copy of this report, *Dying for Development - the Legacy of Lead in Belledune*, some time in August, and the French translation is now available.

In 2003, after almost 40 years of living in the shadow of a lead smelter, residents had their properties tested for the first time. They found their yards and their gardens had lead, cadmium, zinc, thallium, and arsenic levels that were above agricultural and residential soil quality guidelines set by CCME. In 2005, after the province released the result of the health study that was done in Belledune, residents learned that they had the highest disease, cancer, and mortality rates of any area in the province. They also found out that some of the berries, garden produce, and seafood they had been consuming for years had high levels of lead and cadmium.

Instead of ordering a community-wide cleanup of the contaminated properties, the province ordered a risk assessment, which really amounted to a risk assessment on a risk assessment. Despite the fact that the CCME guidelines have been established on a health risk basis, the province asked the consultants to do another risk assessment. The study concluded that the soil and garden produce were not significant pathways of exposure, although the seafood was. At the same time, in a separate study, children living in two neighbourhoods closest to the smelter were found to have blood lead levels two and a half times higher than children living further away. Incidentally, the soil where those children lived had two to four times higher levels of lead than the soil of children living further away.

As for the high metal levels in some of the garden produce, the province said that Health Canada, and I'm quoting, does not have "maximum residue guidelines for lead in food products". Some berries and produce tested in the Belledune area had lead levels up to four times higher than Health Canada's maximum residue guideline for whole canned tomatoes, but the province said, you can't use this value to make any comparisons or say anything about the lead levels in those berries.

As the example of Belledune demonstrates, the emission and discharge limits placed on pollutants from industrial sources under CEPA are not sufficient to prevent pollutants from accumulating in the environment and having an impact on vulnerable populations. People living close to a pollution source need more protection than simple end-of-pipe or end-of-stack emission limits and voluntary CCME soil quality guidelines. The Government of Canada needs to step in and set nationally binding standards under CEPA for contaminants that accumulate and persist in soil, sediment, and water as a result of industrial activity.

Thank you.

● (1600)

The Chair: Thank you very much.

Our next presenter will be from the University of Alberta, Donald Spady, please.

Mr. Donald Spady (Principal Investigator, Department of Pediatrics, University of Alberta): Mr. Chairman and the committee, I'm Donald Spady, I'm a pediatrician from the University of Alberta. I want to thank the committee for the opportunity to present some information with respect to children's health legislation and the environment.

I am here because in September 2004 I was given the mandate by Health Canada to do a survey of governance instruments, or laws, regulations, and guidelines that related to children's environmental health legislation in OECD countries, but not including Canada.

Children are often considered only peripherally in the development of legislation; however, for the creation of new legislation in Canada, Health Canada decided to explore what legislation exists in OECD countries relating to environmental health in children. Today I want to address some issues that have arisen out of our research and hope that they will be helpful in the development of the final product.

Now, apart from the fact that children are Canada's future and that events in environment and childhood affect future health and productivity, you might wonder why children are so special in the creation of environmental health legislation. Kathy Cooper eloquently described the vulnerabilities of children, and I'm going to save the committee three minutes and 13 seconds by not saying the same thing.

I will not go into detail of how we did our survey, nor will I present much in the way of specific findings. Details of what we did and what we found are in the submission to this committee that was provided earlier this year. Suffice it to say we found very few governance instruments that specifically considered children in their genesis or implementation.

I want to spend the remaining time on several more general findings and actions that we think should take place. One problem with environmental legislation is that there are a tremendous number of chemicals in the environment, over 100,000, that can potentially affect any of us. I say “potentially” because for the most part these chemicals have not been assessed for safety to any significant degree. Many of these compounds are in our bodies in minuscule amounts, but for the most part we do not know what particular blood level of a compound is dangerous to humans, nor do we know how combinations of these compounds can affect our health—we are in the dark. Yet, the attitude toward society of the manufacturers of these compounds is that they are safe until proven dangerous.

In an ideal world, these compounds should all have been assessed for safety prior to their use in industry or wherever. Practically speaking, this is not the case. Very few of these compounds have been assessed for safety to any suitable degree. This attitude in part is due to the very high cost of assessing the safety of many compounds and in part to the lax regulation regarding their introduction and use.

One of our recommendations is that there should be a change in regulatory philosophy such that any new compounds must be shown to be safe before they are allowed on the market. This is the proposed approach being taken in Europe under the new REACH proposal, which reflects the registration, evaluation, and authorization of chemicals and requires that all compounds must be shown to be safe before they are licensed for use. There is some leeway in this in that initially compounds to be tested are those produced above a certain volume; however, some other compounds sold at even very small volumes that are felt to be particularly at risk of being dangerous must have their safety demonstrated before release.

This proposal is due to come online in 2007 and will apply not only to Europe but to any manufacturers who want to sell their products in Europe. Since this will ultimately include Canadian and American manufacturers, it might be a reasonable proposal that Canadian legislation also take the general attitude of guilty until proven innocent rather than the current attitude of innocent until proven guilty. Such an approach may act to help industry assess the safety of various compounds by spreading the task of assessment over a larger field of partners, thus cutting the costs. This, however, might require an unrealistic level of cooperation between various industry players.

The second general finding is that as a general rule proposed legislation should incorporate the precautionary principle in its regulation. The precautionary principle states that when an activity raises threats of harm to human health or the environment, precautionary measures should be taken, even if some cause-and-effect relationships are not fully established scientifically. This principle is often viewed by industry as a way of preventing the introduction of new substances. This is not the case. It is only advocating a cautious approach when dealing with a potentially dangerous situation. In fact, the precautionary principle should promote research into the safety of new compounds rather than being considered a mechanism to unnecessarily slow down the introduction of these compounds.

Very little of the legislation we found specifically incorporated the precautionary principle, and what legislation we found was largely from the European Union.

● (1605)

The third message, and perhaps the most important one I want to make, is basically one of placing the needs of children first. They are the most vulnerable Canadians, and they are our future. We recommend that a mandate be created that all governance initiatives consider the potential impacts on children's environmental health, for all legislative, development, and planning activities where children might be affected.

This could be implemented, in part, by the creation of a national level advisory board to monitor these governance instruments. This is similar to executive order 13045 from 1997 that was signed by President Clinton. It was one of the very few governance instruments we found that specifically addressed the unique characteristics of the child.

As part of this, we recommend that there be an annual or biannual report of the most important environmental indicators of the well-being of Canada's children, with each report highlighting a specific issue. Such a report would give children a higher profile within government and within society. It would act as an impetus to improve children's health.

As well, we recommend the creation of an advisory body at the national level that is modelled after the American President's Task Force on Environmental Health Risks and Safety Risks to Children, created by executive order 13045, which would demonstrate the high priority the Government of Canada places on children's well-being. Such a body would also serve as a vehicle for assessing legislative and other governmental impacts on children's environmental health, and it could extend to public education initiatives.

There are several advantages to these recommendations. I think perhaps the most important one is that since children, including the fetus, are often the most vulnerable humans, legislation designed to minimize exposure to potential and actual noxious environmental agents in childhood, for the most part, will meet the safety needs of adults. Another reason is that there would be a need to investigate what various safe levels are for children. There would be a fair bit of research stimulated to address this issue. Also, legislators would become more aware of the importance of children and the factors that can influence their health when creating legislation.

I'll stop now. I have reviewed three important aspects of our research: the need to revise how we assess both old and new compounds for safety, the advocacy of the precautionary principle as a guideline for legislation, and the concept of placing children first when considering legislation.

I want to thank the committee for allowing me to present some of our findings. Thank you.

● (1610)

The Chair: Thank you very much.

Now, from the University of Ottawa, Daniel Krewski.

I understand you have a couple of colleagues who will also be coming. You might introduce them as they enter in on this.

Prof. Daniel Krewski (Professor and Director, McLaughlin Centre for Population Health Risk Assessment, Institute of Population Health, University of Ottawa): Thank you, Mr. Chairman.

My name is Dan Krewski. I'm the scientific director of the McLaughlin Centre for Population Health Risk Assessment at the University of Ottawa, which is also a World Health Organization collaborating centre in population health risk assessment.

[*Translation*]

I want to thank the committee for the opportunity to participate in today's meeting.

[*English*]

We'd like to describe some work we've done in the area of health policy approaches to children's environmental health that was sponsored by the federal government, Health Canada in particular. Under this project, we were asked to look at international evidence on how children's environmental health issues are addressed elsewhere and how learnings from that research could possibly inform the updating of the Canadian Environmental Protection Act.

Our research approach was to identify specific governance instruments and evaluate how effective they were in other jurisdictions, looking at barriers and facilitators involved in their implementation. We used two approaches: expert interviews, case studies, as well as a detailed review of the available evidence. We focused on a series of topics that ran through the entire analysis: lead, mercury, pesticides, endocrine disruption, and both indoor and outdoor air pollutants.

The work we did was conducted within the framework we developed for population health risk assessment, which focuses on the broad determinants of health that Kathleen Cooper talked about earlier. We were interested in genetic, environmental, social behaviour, and lifestyle determinants of health. Having identified risks to health, we looked at a variety of regulatory, economic, advisory, community-based, technological, and other options for risk management.

I'll ask Michelle Turner to talk a bit about some of the substantive issues in our report and then Mike Tyshenko to follow up with some work on risk perception and bibliometry.

Ms. Michelle Turner (Epidemiologist / Research Coordinator, McLaughlin Centre for Population Health Risk Assessment, Institute of Population Health, University of Ottawa): Children's environmental health issues can range from those for which the weight of the evidence is substantive to many more for which the scientific basis for an association is incomplete. For example, much evidence points to a relationship between second-hand tobacco smoke and pre-term birth, asthma incidents and severity, sudden infant death syndrome, and lung and middle ear infections. Cognitive deficits have also been associated with high-level prenatal maternal methyl mercury, PCBs, ionizing radiation exposure, and childhood lead exposure. There are numerous examples of diseases where environmental links are suspected. There are also many emerging children's environmental health issues, including endocrine disruptors, pesticides, chlorination disinfection by product solvents, etc.

Researchers are only beginning to describe the nature of the association between many environmental hazards and health outcomes, as well as their interactions with other health determinants.

We also know the potential social and economic costs can be very high. One study in the U.S. found the annual costs associated with the environmental component of childhood lead poisoning, asthma, cancer, and neuro-behavioural disorders were estimated at $55 billion a year in the U.S.

A high climate of concern also exists over children's environmental health disorders, and I'll touch on this a little later.

If we think about children's health issues from a risk perspective, we want to think about the probability of the occurrence and the nature of the consequences. The probability of the occurrence is influenced by such factors as the nature, level, and timing of exposure, as well as factors influencing susceptibility. Consequences due to early life exposure, along with the development of body systems, may lead to serious, permanent, and long-lasting effects and even death.

The nature of children's environmental exposure is very broad. A number of exposures must be considered.

An exposure that was talked about earlier was breast milk and in utero exposures that are specific to the developing child. We know breast milk is a particularly unique exposure for children and has been found to contain pesticides and plasticizers, among other chemicals.

We must also consider workplace exposures, as parents often bring home these exposures to the child at home. Children have greater contact with their physical environment through crawling and hand-to-mouth contact. These unique differences greatly increase the amount of environmental exposure received.

The increased susceptibility of children due to immature systems is also great. We must consider the critical periods of development for various structures. For example, the lung and reproductive systems are two systems that have been highlighted in the literature. For the reproductive system, as an example, there are many critical exposure time windows during the fetal period, as well as after birth and into adolescence. The child may experience much greater levels of environmental exposure. For example, the respiratory ventilation rate of an infant is approximately 133 millilitres per kilogram per body weight, while that of an adult is only two.

Another example is drinking water. Infants consume nearly double the amount of drinking water per kilogram per day compared to an adult. Similar examples can be found for fruit consumption and soil ingestion.

Another important consideration is the possibility that some groups of children may be more highly susceptible to environmental exposures than average. One example we can think of is possibly the aboriginal population. The aboriginals in the Canadian Arctic have undergone much study through the northern contaminants program. They represent a population in which much greater levels of environmental exposures are found. For example, levels of maternal blood mercury in the Inuit population are much greater compared to other aboriginal groups in the north or Caucasians living in the north, as well as people living further south in Canada.

Last, if we think about the consequences, there are many examples we can think of. One example is lead exposure. In the U.S. the economic losses associated with a decrease in lifetime earnings due to blood level exposure has been estimated at over $27.8 billion for boys and over $15.6 billion for girls annually.

● (1615)

The last point I'm going to make is risk perception. Risk perception is an important component of risk management decision-making.

Through a national survey we conducted, we know that Canadians have a high level of environmental concern. We also know that risk issues associated with certain populations, including children, tend to be perceived as higher. Many of the children's environmental health issues have delayed effects, are newer to science, and have received much mass media attention. All these factors, including many others, tend to increase the levels of risk perceived by the public.

Mr. Michael G. Tyshenko (Risk Analyst, McLaughlin Centre for Population Health Risk Assessment, Institute of Population Health, University of Ottawa): In our study of children's environmental health, we were interested in the public perception of different risk issues pertaining to children. We looked at 17 different news dailies from all across Canada from 1985 until present. We actually did a bibliography searching for over 80 different risk issues and combined them with the key words: “children”, “environment”, and “health”. We were able to rank these 80 different risk issues from the highest number of articles and the highest frequency of these words appearing in the news media. These were newspaper articles that would raise awareness among the general public or point to issues the public may be worried about.

Of course, following on the heels of the Walkerton water tragedy, contamination of drinking water, bacteria and chemicals in water, was number one. Interestingly, numbers two through eight were all the various facets of chemical contamination: lead and lead poising, pesticides in food, and pollution as a general concept. But mostly they were chemicals, pesticides, and mercury in fish. Numbers nine and ten were smoking and tobacco smoke, which have strong chemical components.

We were also interested to see whether there was a linkage in the public's mind between the risk issues we had ranked and legislation or regulation. We added those words onto our search. Interestingly, we saw almost a complete drop-off. There are very few articles that mentioned children's environmental health, a risk issue, and legislation. This leads us to believe that in the public's mind, the news media provides them with a lot of information, but there's not this linkage between the need to do something with regulation and children's environmental health.

In our study, we also conducted a series of expert interviews. We looked at three jurisdictions: Canada, the United States, and member countries of the European Union. We conducted these open-ended interviews, which lasted up to an hour, where we asked them a series of questions to identify barriers, facilitators, and other approaches they use in their jurisdictions to protect children's environmental health.

Regardless of jurisdiction, the experts had common opinions. I'm going to read the top three to you. All of the experts agreed that there were huge areas of uncertainty, and there was simply no information for many chemicals and many chemical environment hazards in relation to children's environmental health.

Secondly, the experts pointed to a lack of research funding, a lack of political will to invest moneys into research, bio-monitoring , database management, and program building. In all the jurisdictions we looked at, experts believed that in order to quantify the scope of the problem and to better understand environmental health outcomes linked to the exposure levels of different chemicals, bio-monitoring is needed. There needs to be a mechanism for sharing this information among different jurisdictions in the country.

The one closed question we did ask in our survey was, does legislation adequately protect children in your jurisdiction? Regardless of whether they were in Canada, the United States, or the EU, about 50% of the respondents indicated that, no, legislation does not protect children's environmental health, and a better job could be done.

● (1620)

The Chair: Thank you very much.

We'll now go to our final speaker, or did you want to finish? You're at 12 minutes and 17 seconds.

Prof. Daniel Krewski: May I have 42 seconds, Mr. Chairman, just to read our four bottom-line recommendations?

● (1625)

The Chair: Okay, go for it.

Prof. Daniel Krewski: We have a large report with a lot of detail, but the four most important points, which we're suggesting action be taken on, are as follows.

Number one is an amendment to the preamble to CEPA that includes provision for consideration of children's environmental health. We've suggested a specific wording: "...including the distinctive risks faced by children and other vulnerable populations".

Numbers two and three focus on maintaining and enhancing the capacity of Health Canada and other government departments to address children's environmental health issues.

Our fourth recommendation is to ensure ongoing stable funding for research to characterize children's environmental health issues as fully as possible. A national bio-monitoring program, as has been mentioned by all of the previous speakers, and a broad-based research program would, we think, be critical to ensuring the future of children's environmental health.

Thank you.

The Chair: Thank you very much.

We'll go now to Imperial Oil, and Mr. Roger Keefe.

Dr. Roger Keefe (Imperial Oil Limited): Good afternoon. I'm Dr. Roger Keefe of Imperial Oil. I was asked to speak to you on today's topic by the Canadian Chemical Producers Association. I also work closely with the industry coordinating group for CEPA; they have also previously appeared before you.

My views are technical in nature. They're based on about 30 years of experience since I completed my PhD and somewhat less since I got board certification in toxicology. Most of those years were in industry, dealing with safety testing and risk assessment. My career has focused on mammalian toxicology and human health risk assessment, and that's going to be the focus of most of what I say.

My remarks are really in support of just two basic propositions. One is that the susceptible subpopulations in ecosystems are already considered in risk management decisions made under CEPA when there is scientific evidence. Number two is that while consideration of susceptible subpopulations in ecosystems is implicit, there may be good reason for not making it more explicit in CEPA. I'll elaborate on those two.

On the first, that consideration is already given to susceptible subpopulations, it is clearly demonstrated in the existing CEPA risk assessments. For example, under the priority substances list program, human exposures during different life stages are estimated, and risk assessment conclusions were based on the most-exposed life stage, whether it was infants, children, adults, or the elderly.

Although less common, if there was a known difference in susceptibility owing to gender or race or any other factor, the guidance value or exposure limit that comes out of the risk assessment would be based on the most vulnerable group. This is standard procedure in toxicology when there is documented sensitivity for a substance.

There are other procedures at Environment Canada and Health Canada that should give us assurance that sensitive subpopulations in ecosystems are being considered. I just have four bullets here. First is their participation in international assessments and tool developments such as the World Health Organization, mentioned earlier, or the Organisation for Economic Co-operation and Development. Most substances, after all, are not unique to Canada in today's global market.

The second is the use of outside academic experts for advice and peer review of assessments. I think that keeps the departments at the cutting edge of science in doing a good job and in being aware of any evidence on susceptibility.

Third is the use of staff with skills and experience to conduct risk assessments—people who in academia are referred to as high-quality personnel.

Fourth is the maintenance of the capacity to conduct and publish peer-reviewed research.

It should not surprise you, given my background, that these four points are in recognition and support of a high-quality scientific risk assessment process in general. When that process is well informed and well executed, the current risk assessment process takes into account sensitive subpopulations in ecosystems.

My second proposition—that it may be better to leave consideration of susceptible subpopulations in ecosystems implicit in CEPA—stems from the need for professional judgment to deal with a lack of the necessary scientific information. Absent data on vulnerability, it would be better to use professional judgment on a substance-by-substance basis to choose between precaution and more research.

If vulnerable subgroups are explicitly considered in the act, it will likely lead to greater precaution, because data are often lacking. I would prefer to fill data gaps to reduce the uncertainty in the decision-making process rather than build into the act an allowance for greater uncertainty with unknown risk benefits. We need decisions that are based on better knowledge.

● (1630)

A concern I have about a broad increase in the use of precaution is that decisions may not be reviewed, at least for a long time, in light of new data. A principle in the Government of Canada's paper on the use of precaution in decision-making is a reconsideration of precautionary measures. If more decisions are going to be precautionary in nature, then we will need to reinforce this principle and ensure that substance risk assessments are reopened as new data become available.

Professional judgment by the government side will continue to be aided by the ongoing research on susceptible subpopulations in ecosystems. Currently there are a wide variety of genetically modified knock-out mice, for instance, that could be used as models of the heterogeneity in the human population. Gene arrays containing dozens or even hundreds of genes are also being used to study how genes are up-regulated or down-regulated in response to substances. Developing research on epigenetics and the use of biomonitoring in risk assessment will also affect the way we assess susceptible subpopulations. These are very active areas of research now, and we need to have the flexibility to incorporate new results or tests into our risk-based approach.

Finally, what tests and how much testing there ought to be should depend on how a substance will be used and who may be exposed. So it should be decided on a substance-by-substance basis; it's impractical to test all species or potentially exposed subgroups. Increased testing, or costs, could be a barrier to use of a substance in Canada or may limit its uses here since Canada is such a small market. Those potential economic losses, or the loss of other benefits of the substance, need to be balanced against the unknown reductions in risk. Other likely costs to consider are larger government departments to conduct or interpret test results, and a possible burden on industry as well.

In summary, if scientific information is available, I believe it is being used and will continue to be used to account for susceptible subpopulations in ecosystems. Where such information may not be available, I believe the exercise of professional judgment implicit in CEPA, given the range of powers already in the act, is adequate to account for susceptible subpopulations in ecosystems.

Thanks for inviting me to appear.

The Chair: Thank you, Mr. Keefe.

Aaron Freeman, I understand you have a very brief intervention. If you could keep it to that, please, we could get to our members' questions.

Mr. Aaron Freeman (Director, Policy, Environmental Defence Canada): My name is Aaron Freeman. I'm the policy director with Environmental Defence Canada. I'd like to talk about the Great Lakes St. Lawrence Basin as one of Canada's most vulnerable ecosystems.

The basin is home to more than 30% of the Canadian population, and it generates about one-quarter of our GNP. It's the largest freshwater ecosystem in the world, and it's hard to overstate the seriousness of this basin as a toxic hot spot. Fifty-eight per cent of the industries that report to the National Pollutant Release Inventory are located within the Great Lakes/St. Lawrence Basin. Air, water, and land-based pollution releases are disproportionately high, with nearly half of all toxic air pollution being emitted within the basin. Canada is falling behind the United States in terms of cleaning up the basin. On a per facility basis, National Pollution Release Inventory facilities emitted on average 93% more air pollution than their U.S. counterparts. According to the Commission on Environmental Cooperation, between 1995 and 2002, Canadian facilities reported a decrease of just 2% in air pollution, versus U.S. facilities reporting a decrease of 45%.

For the first time, we're now seeing the United States moving forward in Great Lakes protection generally without Canadian participation. While Canada allocated $125 million over five years for Great Lakes protection in the 2005 budget, U.S. legislative commitments to restoration efforts leave Canada lagging far behind. These include the 2002 Great Lakes Legacy Act, which earmarked $270 million to cleaning up contaminated sediments; and the Great Lakes Regional Collaboration, which was established by a presidential executive order in 2004. It identified the Great Lakes as a national treasure and it brought together stakeholders from various levels to complete a comprehensive, integrated plan for improving the Great Lakes, and the plan was released in December 2005. The collaboration formed the backbone for two federal bills, each of which have garnered widespread congressional support. These bills would earmark between $10 billion and $20 billion for Great Lakes cleanup work, boosting research and monitoring, cleaning up contaminated sediment, and remediating the effects of invasive species.

There are serious effects of the United States, moving forward, with legislative commitments without Canada, and I can go into some of those impacts in the Q and A. The Great Lakes Water Quality Agreement is currently being reviewed. This agreement has been a model for international cooperation, but we need to bring the agreement up to date. One of the things we're proposing is for CEPA to be the implementing mechanism for this agreement.

Finally, it's worth noting that all four major political parties pledged in their last election platforms to implement restoration efforts in the basin.

What we propose is a new section of CEPA to protect significant geographic areas that are vulnerable to pollution. My submission goes into greater detail as to how this would work within CEPA, but first it would grant the Minister of the Environment the power to designate a geographic area “significant” if that area is especially vulnerable to pollution, or if high levels of toxic substances are used or generated in that area. Second, we would propose designating the Great Lakes/St. Lawrence Basin as the first such area, establishing pollution prevention goals, including overall five-year and ten-year pollution prevention targets, elimination goals for carcinogens, for smog precursors, and CEPA-toxic substances.

● (1635)

The Chair: Mr. Freeman, if I could interrupt, the IJC has reported, and actually really we should be sharing time; we already did go over with Ms. Cooper. Perhaps you could bring it to a close, so we can get on to our members, please.

Mr. Aaron Freeman: Sure.

My submission goes into greater detail about the legislative and the non-legislative requirements of how to implement this recommendation. We think that this would provide protection for the Great Lakes/St. Lawrence Basin. It would provide a mechanism to implement international agreements such as the Great Lakes Water Quality Agreement and to fulfill a campaign promise for each of the four major political parties.

I'd be happy to deal with your questions.

The Chair: Good. Thank you.

Perhaps we could begin with Mr. Godfrey and Mr. Rodriguez, sharing 10 minutes.

Hon. John Godfrey (Don Valley West, Lib.): I'll try to be fairly brief.

It seems to me we're trying to do two things today. One is to figure out whether we can strengthen CEPA legislation by specific reference to vulnerable populations. And the second is whether we can strengthen CEPA by specific references to ecosystems not currently contained in the legislation.

Perhaps I will tackle the first question. It's interesting that the University of Ottawa folks, after their presentation, when it came down to what would actually be their recommendation for CEPA, really only wanted to amend the preamble to CEPA, and all the others were useful activities but not about our review of CEPA.

When I look at the child health environment, Ms. Cooper's presentation, it's only the last point that specifically deals with vulnerable populations, because it's about mandatory child health protective measures. Everything else is good, but it's not in the realm of our review of CEPA. To put more resources into child health or environmental issues is not part of the CEPA review.

Soon the first point, which has to do with these vulnerable populations, does the language that has been used in the new Canadian Pest Control Products Act, which only came into being in June 2006, meet the criteria that people are advocating in terms of strengthening language? Or is there some danger that it actually weakens the legislation because it tries to do too much, because it tries to single out individual populations. If you go with Dr. Keefe's view of the world, if you just say we'll go with the most vulnerable population and all the others will benefit from it, might that actually be a cleaner way of doing it?

So what I'm asking is this, and maybe we'll start with Ms. Cooper. Would you be happy if we simply took over the pest control language, which hasn't really been tested in any length since we've only just brought in the act?

● (1640)

Mrs. Kathleen Cooper: And I'm keeping a close on eye it.

I would point out that the last four of the recommendations, not only the final one, have to do specifically with amendments to CEPA and its implementation.

I had to be really brief and provide a lot of points in a short number of words. In the submission we made to this committee back in June, jointly with Environmental Defence, through Pollution-Watch, there were many more detailed recommendations with respect to speeding up the process, the timelines, and so on, that would benefit vulnerable populations.

So yes, in response to your question, in the Pest Control Products Act, much beyond just a change to the preamble would be good. I think children deserve the same level of protection from the federal government for toxic substances as you've put in place for pesticides.

Hon. John Godfrey: Dr. Keefe, in terms of that response.

Dr. Roger Keefe: I'd rather wait and see how the PCPA changes play out in time. I'm not keen to go down that path, because I think toxic substances are inherently different from pesticides, perhaps. There may be some that are similar and others that are different. They're a broader range of chemical substances that I wouldn't want to force into the same mould as the PCPA employs.

Hon. John Godfrey: Is there anybody else on this point before I turn it over to my colleague?

Prof. Daniel Krewski: Could we just get clarification on the PCPA? Are you referring to the additional tenfold margin of safety that's recommended unless there's evidence to the contrary, or to a more general statement?

Hon. John Godfrey: I guess what I'm referring to is the language in the preamble, which says “in assessing risks to humans”, “aggregate exposure”, “cumulative effects”, “different sensitivities”, “of major identifiable subgroups, including pregnant women, infants, children, women and seniors”; in other words, being very specific about the subgroups in the preamble. Is that what you want in the preamble to CEPA?

Actually, there are two other parts to that: section 4.1 as well of the Pest Control Products Act, and applying appropriate margins of safety, threshold effects if it's near a school or homes—-that's the sort of language.

Prof. Daniel Krewski: Let me make two quick points in response to the question.

First, you heard our recommendation to specifically identify children in the preamble to CEPA. I think Dr. Keefe made some very reasonable arguments that all sensitive subpopulations are really intended to be taken care of. I think the only reason we've suggested singling out children is that they are unique in certain ways. We're looking at developing organ and tissue systems, physiological characteristics that are unique to that life stage. If we look at other susceptible subpopulations who are defined in terms of genetics, different polymorphisms of the population, socio-economic status, those would be very difficult to address. There seems to be a uniqueness about children and also the tremendous concern about them. They are our future. So if you had to pick one, our thought was that children are worth a mention. But we do agree with Roger that they are implicit.

On the second point, the PCP Act is I think the first statute in Canada where we've actually requested additional assurances of safety for children. It's intended that there be an additional tenfold margin of safety for children—that's the default—unless you can show that children are not more susceptible than adults, in which case you can dispense with that.

That goes back to the Food Quality Protection Act of 1996 in the U.S. I think I had the pleasure of making a contribution to that through a report we did through the National Research Council in 1993. It made exactly that recommendation. We were delighted to see that it was actually taken up in U.S. legislation, and in turn, it has been picked up now in Canada.

Those are my two comments.

The Chair: Ms. Cooper, I know you wanted to get in on this, but it really is Mr. Rodriguez.

Go ahead.

[*Translation*]

Mr. Pablo Rodriguez (Honoré-Mercier, Lib.): Thank you, Mr. Chair. I have a few quick questions to ask.

First, Ms. Cooper, you said that cancer is rare in children. However, are cancer rates on the rise?

● (1645)

[*English*]

Mrs. Kathleen Cooper: If you look at the rates for cancer in children in Canada over time, you do not see an upward increase. However, if you look at much larger populations in the European Union and the United States, there is a 30-year upward trend in cancer in children. There are the same kinds of cancers in children in Canada as in other industrialized countries. Whether the fact that we don't have an increasing trend is just a matter of a rare disease in a small population or whether we simply don't have an upward increase, you can't tell with the numbers.

[*Translation*]

Mr. Pablo Rodriguez: We didn't talk about this, but there's probably a link between the general health of children and the fact that they're less active, more sedentary and don't play outside as much as they used to. All these elements must have a health impact. So you wonder what you can try to do to encourage our young people to be more active.

[*English*]

Mrs. Kathleen Cooper: Absolutely. There are multiple determinants of health. One thing you can do about increasing children's activity is curbing urban sprawl and increasing opportunities for public transportation—additional environmental policies that can be beneficial to the population as a whole. We have a car-dependent, sedentary society, and that has an impact on children.

So yes, you look at the whole package, but what we were talking about today is the contribution of environmental factors to serious health outcomes.

[*Translation*]

Mr. Pablo Rodriguez: My next question is addressed to whoever wants to answer it. Speaking of health, how do our children compare to those of other G-7 countries? Are there major differences in this regard between Canadian provinces?

[*English*]

The Chair: Does someone want to jump in on that? Health Canada? Mr. Glover?

Are you going to pass?

[*Translation*]

Mr. Pablo Rodriguez: Why doesn't he want to answer?

[*English*]

The Chair: Yes, he passed. He's chicken.

[*Translation*]

Mr. Pablo Rodriguez: I have a very quick last question. I didn't hear anything about climate change and greenhouse gases. It seems to me there's a consensus that global warming is having short, medium and long-term impacts. Mr. Freeman may have something to say about this. Surely global warming is affecting children and their health and has medium and long-term effects on populations.

[*English*]

The Chair: Very briefly, Mr. Freeman, please.

Mr. Aaron Freeman: I'm not an expert on child health. I can tell you some of the impacts that have been discussed in the Great Lakes, but I'm not sure if that's what you want to hear.

The Chair: Mr. Glover, did you have a quick answer?

Mr. Paul Glover (Director General, Safe Environments Programme, Department of Health): With climate change, not specifically, but if you take a look at air health effects, particularly in vulnerable populations, there is evidence to suggest that smog, in particular, does have an impact on seniors as a vulnerable population—so not children, but a different vulnerable population. And those who have pre-existing health conditions do suffer more as a result of what are often described as “bad air days”.

The Chair: I'm going to go on to Mr. Lussier, and then we'll come back to Mr. Spady.

[*Translation*]

Mr. Marcel Lussier (Brossard—La Prairie, BQ): Mr. Chair, this committee received documents from two agencies about private testing for pollutants. Mr. Freeman has tabled an excellent study conducted with Mr. Cook's participation on children's contamination.

Mr. Gaudet or Ms. Cooper, did your organizations test children for contaminants?

[*English*]

Mrs. Kathleen Cooper: The role that I play as researcher in my organization is to review the secondary literature. I don't have the resources to do that kind of original research myself, but I'm told I'm very good at knowledge translation. That's why I have put together the primer and the summary materials that I've given you today, for the sake of educating parents, to both help them avoid hidden and known risks now and to help them engage in this kind of process to be able to see reforms happen, so that the overall environmental protection is improved for them and for their children.

● (1650)

The Chair: Mr. Glover, did you have a comment?

Mr. Paul Glover: Just very briefly, because the question was about studies, and in the spirit of transparency, Health Canada is working with Statistics Canada to do, as was pointed out, a one-time bio-monitoring study, something we hope can be annualized. It is worth noting that at this point in time the age break for children does not go quite as young as both departments would ideally like. I believe it's six years, so we're not getting down to the youngest of children.

The Chair: Mr. Lussier.

[*Translation*]

Mr. Marcel Lussier: Did you read Mr. Cook's studies?

Mr. Paul Glover: I didn't read them, so I can't speak about the studies conducted by the groups that are present today.

Mr. Marcel Lussier: The University of Ottawa conducted a review of news media, but I want to know if you did any blood tests on children, and particularly newborn babies.

Prof. Daniel Krewski: Yes and no. We conducted studies on children's health but we did not collect any new bio-monitoring data. We examined exposure levels to pesticides and other toxic chemicals.

[*English*]

But I would like to mention, if you're interested particularly in bio-monitoring, the best place to go is the recent U.S. National Research Council's report on bio-monitoring. It just came out. We had a workshop on bio-monitoring at the University of Ottawa several weeks ago, and we had the chair of that committee, Dr. Thomas Burke from Johns Hopkins University, come and address us. We have a full report, some several hundred pages, of the proceedings of that workshop on our website.

The Chair: Ms. Milewski.

Mrs. Inka Milewski: I have done some direct research on the impacts of exposure to lead in the community of Belledune, where the province did do blood sampling. Bio-monitoring testing is done, but if you can't correlate it to any symptoms that you might see in these children, it really isn't going to tell you very much.

We went into the population and did a survey of children's health. We actually looked at children living at various radiuses from the smelter. We knew what their blood lead levels were, and we then had the parents tell us what symptoms they had. What we found astonishing was that children living closer to the smelter had on the order of three to four more health problems per child than children living further out of a three-kilometre radius. We have done that kind of work, and there is a correlation.

They also had higher lead levels in their soil. So now you have a direct link between contaminants in the soil, contaminants in their blood, and health problems.

[*Translation*]

Mr. Marcel Lussier: Mr. Freeman, I think you privately tested 13 individuals for 68 toxic substances and that the cost was about $10,000 per person.

[*English*]

Mr. Aaron Freeman: We've done two studies under the toxic nation project that we've been running. I wouldn't characterize these as scientific peer-reviewed studies. We don't pretend that they are, although they are consistent with a lot of the studies that have been done in other jurisdictions.

We've tested for many of the chemicals, which we've talked about here—perfluorinated compounds and flame retardants—and we've come up with very similar findings. For example, when you ban a chemical, you see a more reduced level of toxic burden in children than you do in adults. But for persistent chemicals, such as flame retardants that haven't been banned, we actually found higher levels in children than in their parents.

The next round of testing, which we'll be releasing within the next month, is actually the ministers of environment and health, and various critics.... So I'm sure everyone around the table will be interested to see those results.

The Chair: Mr. Krewski, did you have a comment?

Prof. Daniel Krewski: It was a point of general information, Mr. Chairman, which I think relates to Monsieur Lussier's question and to several other questions. There are two documents—one is published and the other will appear shortly—that might be of great relevance to the committee's deliberations.

I chaired a committee with the U.S. National Research Council on how to test environmental agents for toxicity, in the broad sense. We published a report last year that goes into detail on all the different approaches and the current state of the science.

Our follow-up report, which we're just wrapping up now, looks at how we can do this better in the future. Our charge was to look 10 or 20 years down the road, to really be transformative, and to ask questions such as these: Is it possible to test all chemicals? Is it possible to find more efficient ways that would use fewer animals? What are the emerging technologies that can really help us do toxicity testing smarter? How do we address all of the different life stages at which there might be unique vulnerabilities?

That report is undergoing peer review and should be finalized. I would certainly be happy to make a copy available as soon as it's completed.

● (1655)

The Chair: Good. Thank you. You can give it to the clerk.

Mr. Ouellet.

[*Translation*]

Mr. Christian Ouellet (Brome—Missisquoi, BQ): Thank you, Mr. Chair.

I worked several years in the field of air quality inside buildings, houses and developments. I had a research centre at that time and we found out that levels of pollutants were much higher inside buildings than outside and were making people sick.

Even in the case of the people you mentioned who were living near a smelter, they often become sick inside their homes because they get back from work with clothes contaminated by lead and so on. Allergies and health problems develop inside the home.

Since I left all of that behind ten years ago, I was wondering if a lot of effort still goes into the selection of materials. I have worked in this field. What you can find in a carpet is really frightening. It's hard to imagine how all these things can live in there. They won't kill you, Mr. Chair, but they are bad for your health.

To the best of your knowledge, has any work been done in this regard in the past ten years? If yes, what kind of measures are being taken to improve inside air quality?

[*English*]

The Chair: Monsieur Gaudet.

[*Translation*]

Mr. Michel Gaudet: As a matter of fact, the Canada Mortgage and Housing Corporation has a list of less toxic materials. Our own association has such a list on its website. We hear a lot about building materials and cleaners. It's true that carpets can release gases. The furniture here is made of pressed wood and thus contains a lot of glue. Some cleaners release toxic substances in the air.

There are buildings in Montreal with little airflow where they had to change the cleaning products they used because people were getting sick. They now use natural cleaners, and this seems to have cleared the problem.

[*English*]

The Chair: Ms. Cooper, did you have a comment?

Mrs. Kathleen Cooper: Yes. When I mentioned the areas where we thought exposure was of the greatest concern and I said “air”, I meant indoor air equally to outdoor air. Regulating indoor air is very challenging. However, what you can do with CEPA is get a grip on regulating consumer products, which are often the source of many of the contaminants of concern. That is why we've put such a focus on that source of exposure. It's not just air; the contaminants are in the house dust.

The Chair: Thank you.

Mr. Warawa is next, and Mr. Harvey, I believe.

Mr. Mark Warawa (Langley, CPC): Thank you, Mr. Chair. I'll be splitting my time with Mr. Harvey.

I really appreciate the witnesses being here today. I find this very interesting.

I will give a little background on myself, and I'll try to make it short. My wife and I have five children, and given the importance of what they eat and their environment as they develop.... We are now in the stage of our life where we have grandchildren, and we hope and pray that they develop in a healthy way. We have three and two-thirds grandchildren; there is one on the way.

I really appreciate the comments and the focus on children who are developing, in their younger ages and even in the pre-birth time of their lives. I also have an 84-year-old father and can see how vulnerable he is to air quality.

Under the Pest Control Products Act—Mr. Godfrey alluded to this.... I want to read a paragraph there. It says “...in assessing risk to humans, consideration be given to aggregate exposure to pest control products, cumulative effects of pest control products and the different sensitivities to pest control products of major identifiable subgroups...”. The vulnerable groups are listed as pregnant women, infants, children, women, and seniors. That is a very clear list of vulnerable groups.

Is there support for that being part of the preamble in CEPA? Could I have a quick answer to that?

● (1700)

The Chair: Ms Cooper.

Mrs. Kathleen Cooper: Yes, there is, but it's for more than just having it in the preamble.

The Chair: Are there any other comments?

Go ahead, Mr. Warawa.

Mr. Mark Warawa: I want to assure you that the Clean Air Act, which we tabled a couple of weeks ago, deals with this very issue. It shows that we have definitely been listening regarding the targets of air pollutants—those who create the air pollutants. We're setting targets, which will be set in the springtime, focusing on the large final emitters, focusing on fossil-fuel-fired electricity generation, the upstream oil and gas, downstream petroleum, base metal smelters, iron and steel producers, cement, forest products, chemical production, and on and on.

The other thing of interest, which was alluded to a moment ago, is the indoor air quality. The information I have is that Canadians spend about 90% of their time indoors, and so you have chemicals. Mr. Ouellet adequately shared that.

I just ordered a new suit from a local dealer, and for an extra $8 I can have Supercrease put onto my pants so that the crease on the front and back of my pants will stay crisp. I said, “Sure, let's do it.” But you wonder about the flame retardants that are in our clothing, our cars, our houses. They add a degree of safety in our homes, and the super crease in my pants, but these are chemicals that are against our bodies, and which we absorb. There is this balance of having a quality of life, but maybe not, in that it can cause people to get sick.

I found the toxic nation report very interesting. The sampling was very small, so we don't know the consequence of those chemicals, but focusing first on the vulnerable groups is a good focus.

I'm probably out of time now, anyway. Are there any comments on the quality of the products that we use?

The Chair: Mr. Freeman.

Mr. Aaron Freeman: This relates to your first comment more. I would strongly support the inclusion of vulnerable populations in the preamble, but I would also support vulnerable geographic areas. It's difficult, given the problems Canada faces, to separate the two in some cases.

The Chair: Ms. Milewski.

Mrs. Inka Milewski: I was just wondering, Mr. Warawa, if you would forgo the crease in your pants if you knew it was going to affect your grandchild.

Mr. Mark Warawa: That's the point. If I'm holding my grandchild.... And so, education has a very important role in this, as we realize that what we have on affects those who are vulnerable and growing. That's a good point.

The Chair: Ms. Cooper, Mr. Glover, and Mr. Krewski.

Mrs. Kathleen Cooper: You suggest a really good example of where we need to insist on safer alternatives to the kinds of chemicals that you mention. In fact, there are safer alternatives to accomplish the same objectives, maybe not quite so creased but maybe we could live with that, and at the same time erring on the side of caution and preventing exposure to those kinds of chemicals that we're increasingly finding are persistent, and toxic, and should be banned in many cases.

Mr. Paul Glover: On a point of information, Mr. Chairman, because it was brought up, the amendments proposed to CEPA through the Clean Air Act do deal with products and indoor air, so it would allow the department to take a look at products that emit air pollutants. At this point in time, Health Canada issues guidelines on the built environment or indoor air, so when the committee looks at it—I understand it's been referred here—I'm sure that will be part of your debate.

The Chair: Mr. Krewski.

Prof. Daniel Krewski: I have three quick points, Mr. Chairman. They all relate to the issue of indoor air quality, which has been brought up by several people who have spoken.

First, it's clear that indoor air pollution is at least as big a problem as outdoor air pollution. The levels can be higher, the population health impacts can be equally great, and we do spend the bulk of our time indoors.

Second, how do we go about addressing indoor air as a risk management issue? It's quite different from outdoor air. We can't set Canada-wide standards for indoor air, because there are local micro-environments that would have to be handled each uniquely, and who would be responsible?

But there are two approaches, both of which have been mentioned. One is to focus on products that would release contaminants into indoor air. Gas stoves for cooking that release a series of gaseous pollutants would be another example, beyond..... What's the name of the compound that creases your pants really nicely?

● (1705)

Mr. Aaron Freeman: It may be a PFOS, but we don't know.

Prof. Daniel Krewski: We can focus on the products, and as Mr. Glover mentioned, we can also establish guidelines.

I'm pleased to observe to the committee that Health Canada has reduced the guideline for concentrations of radon in indoor air from 800 becquerels per cubic metre down to 200 becquerels per cubic metre. Radon is the second leading cause of lung cancer after tobacco smoking, responsible for some 10% of all deaths. That kind of action on the part of the department I think is another vehicle that we could use to address indoor air quality issues.

The Chair: Good. Thank you.

Mr. Harvey.

[*Translation*]

Mr. Luc Harvey (Louis-Hébert, CPC): I have two minutes and ten seconds left. First, I want to thank you for coming at such short notice. I know you were only told about this meeting a very short while ago. I'm very happy we could meet today since this meeting would otherwise have been delayed until January or February. And as an election is possible, perhaps it wouldn't have taken place at all.

Mr. Spady, after the question on global warming, I noticed you raised your hand but you didn't have the opportunity to speak. I would like to hear you on this issue.

[*English*]

Mr. Donald Spady: Thank you very much.

I think there are effects of climate change that do affect children. For one thing, it's predicted that there will be an increase of rather unique or exotic illnesses that children can get because of the change in climate. We're going to have different forms of insects and rodents that can convey and act as vectors to cause illness.

But one other thing that I think is very important and hasn't come out with climate change is the likelihood of mental disorder or behavioural problems in children. I see this when we have the predictions of drought in the prairie provinces, lack of water. Even without the drought there's going to be a lack of water. There's going to be a much more anxiety-producing time for farmers in terms of their livelihood. For example, in Australia right now, which is having a very severe drought, the incidents of suicide among farmers has gone up dramatically. Suicide in anyone, but certainly your father or your parents, is going to be traumatic to a child. And I can see where we might have more of this sort of problem as time goes on, that we're going to have situations that children will have to deal with that will be quite difficult.

The Chair: Mr. Gaudet, did you want to get in on—?

Mr. Michel Gaudet: Regarding the vulnerable population, it should not only be in the preamble, because the preamble is worth the paper it's printed on.

Also, the people who suffer from multiple chemical sensitivities, how do you deal with them? They're not mentioned in the vulnerable population that is on the PCPA, and they should be addressed, because these people—either they were veterans who went to the Gulf War and have been affected by chemicals over there, or people in their everyday life—are being affected. These people become isolated because they cannot stand any perfumes or any chemicals.

How do you address their problems?

The Chair: Mr. Krewski.

Prof. Daniel Krewski: I had two points, if I could be brief. On the climate change question, Mr. Glover mentioned the link between climate change and air pollution, but I'd like to re-emphasize that. What you do to control the emission of greenhouse gases is probably going to result in a concomitant reduction in the release of traditional air pollutants into the atmosphere. And we have very well-established links between particulate and gaseous pollutants on children's health.

We've done studies in the city of Toronto that show that ozone and particles can have a big effect on urgent, life-threatening respiratory diseases for children under the age of two. So there is this close linkage between control of greenhouse gases and the reduction in traditional pollutants that impact appreciably on children's environmental health.

On the second point on how we handle issues like multiple chemical sensitivity, even though I've been a Canadian my entire life, I keep referring to work I've done outside this country with the U.S. National Research Council for six years, developing a series of volumes on acute exposure guidelines for highly hazardous substances. We've published guidelines for 60 compounds, a complete methodology for establishing those guidelines, a risk assessment methodology over a period of six years, and these are the most potent agents you might come in contact with on an emergency basis in your general environment.

In that risk assessment volume, we distinguished between sensitive subpopulations and hypersensitive subpopulations, primarily because people on the committee raised the question of multiple chemical sensitivity. And the question was how far do we need to go in protecting the population, because there might always be somebody who is exquisitely sensitive, so it would be very difficult to ensure the guidelines we were establishing were health protective.

The bottom line is the guidelines, if you look in the volume that describes how we did it. The acute exposure guidelines the committee established were intended to protect sensitive, but not necessarily hypersensitive, subpopulations.

That is just a point of experience from another related application.

● (1710)

The Chair: We'll go to Mr. Silva for the second round, please.

Mr. Mario Silva (Davenport, Lib.): Thank you very much, Mr. Chair.

In doing a risk assessment and looking at the different exposures of different chemicals and substances, we always have to keep in mind that we're looking at one ecosystem, one world, and that what we do impacts on other communities and other people's lives, so that product Mr. Warawa mentioned he used for his pants will have consequences somewhere else down the line. So we can't deal with these issues in isolation.

Earlier in our committee, we had talked about the importance of precautionary principles and that's something we should always adhere to, especially as members of the committee looking forward to dealing with the whole CEPA review.

We've had a good discussion about the whole issue of vulnerable populations. As we review the CEPA legislation, how can we better protect and identify those vulnerable groups and ecosystems? How can we make sure it's in the legislation?

The Chair: Ms. Cooper, I think you had your hand up first.

Mrs. Kathleen Cooper: I would like to relate what you've just said back to what we were talking about earlier. You said we can't deal with these things in isolation, nor should we continue to deal with only one chemical at a time in isolation from the real world exposure to the experience.

One of the benefits in the amendments to the Pest Control Products Act that can't be directly transferred to CEPA, but can be worked with—and we'd be happy to work on draft amendments, and in fact, guarantee we will send draft amendments to suggest for you.... One of the important changes in the Pest Control Products Act is to look at groups of substances with common mechanisms of toxicity and to aggregate exposure. That's one of the better changes that should be adapted into CEPA, to begin looking at real world exposures to multiple chemicals. We don't have the science to look at those that don't necessarily have common mechanisms, but it's a start and it's a matter of modernizing the risk assessment process under CEPA in a way we've already done with pesticides.

The Chair: Ms. Milewski.

Mrs. Inka Milewski: Perhaps this is not the forum in which to do this, but we have been talking about risk assessment processes. I think for PBDEs, for example, which have been evaluated by some kind of risk assessment process, now that they're found in the breast tissue of women in Canada at rates higher than are seen in Sweden, it's hardly a ringing endorsement of the risk assessment process. Presumably that compound went through a risk assessment process, and now we're finding high levels in women in Canada. I think that whole risk assessment process has to be put into question.

Somebody mentioned the precautionary approach. In fact, there is a whole scholarly and academic and policy arena where this is being discussed, where they are looking at the precautionary approach or precautionary-based assessment versus the risk assessment process. It has very different premises and different methodologies. Perhaps we need to start looking at that and perhaps invite some kind of forum or conference on evaluating the implications of using a precautionary approach to these chemicals versus the risk-based assessment. That hasn't been done in Canada. I know it's been done in the U.S.

● (1715)

The Chair: Mr. Keefe.

Mr. Roger Keefe: I had a comment on the use of risk assessment for mixtures or groups of similar substances. I think cumulative exposure is an approach you can take on things like the organophosphate pesticides that have a similar mechanism of action.

I think, again going back to my arguments, that that's already being done by Environment Canada and Health Canada for things that have a common mechanism of action. Polycyclic aromatic hydrocarbons are being addressed as best they can be as a group, and dioxins and furans and those kinds of things. Sometimes the relationship, though, sort of falls apart. It holds up pretty well for dioxins and furans, but for PAHs it depends on the end point, sometimes, where it doesn't hold up quite so well for cancer and the effects on blue-green algae, and so on.

The Chair: Okay. We'll go to Mr. Watson.

Mr. Jeff Watson (Essex, CPC): Thank you, Mr. Chair.

I found the presentation, the primer on child health and the environment, quite interesting. My wife, by virtue of her trade—she is a doula—does a lot of prenatal education, postpartum breastfeeding support, and a number of things like that.

You talk about chemicals in breast milk and chemicals in formula. Let's switch the page. There was one thing that was rather silent in the study, and that's chemicals in vaccines, which we're administering at younger and younger ages, including at hours old for some infants in some jurisdictions, like New Brunswick, for example. We're standardizing multiple vaccines for as early as two months of age.

Can anyone on the panel inform us of some of the studies out there on the chemicals that are used in vaccines or in their manufacture and what effect that has on development health issues and things like that with respect to infants and young children?

The Chair: Go ahead, Ms. Cooper.

Mrs. Kathleen Cooper: Dr. Spady, you may want to chime in, as well.

I believe that one of the most contentious issues you're raising is the issue of thimerosal or mercury-based preservatives in vaccines, which was phased out for childhood vaccines several years ago. It's still in the flu vaccine, which raises some concerns.

We did a review with experts at Toronto Public Health to answer that, because these questions definitely have come up in response to these educational materials. While we need more evidence, we decided to go with the prevailing public health message, which is that the benefit of vaccines outweighs the uncertain science of contaminants in vaccines thus far. I would say that the jury is still out.

We felt the need to make that response to these concerns because of the involvement of public health departments in our partnership and because we drew upon their advice.

I think Dr. Spady might want to add something.

The Chair: We'll have Dr. Spady and then Mr. Glover.

Mr. Donald Spady: I would endorse what Kathleen has said, because the benefits of these vaccines far outweigh any potential detriment.

Now, I don't know, maybe there are some children that are very sensitive to what happens to be in a vaccine, but it would be very difficult to tell before the fact. I think from a public health point of view, it clearly benefits the child to have the vaccine.

With respect to the thimerosal in vaccines, the studies and the reviews that have come out more recently would suggest that that compound really has not been a major player in the development of autism, which I believe is where you're perhaps coming from. Overall, vaccines are good for you.

The Chair: Mr. Glover.

Mr. Paul Glover: I believe the question has been answered. This is just to say that while it's not my direct area of responsibility in Health Canada, this is something the department looks at.

I believe the response of the witness is consistent with the view of the department in its evaluation, but if it interests the committee, we would be happy to provide additional information through the clerk, if it is felt that the question has not been answered.

Let me very briefly go back to the last question, Mr. Chairman. When we speak of cumulative effects and impacts, one of the things that are important, given that this is new emerging science, is trying to figure out which mixtures matter, what the cumulative impacts are, and the different uses of some of these chemicals we talk about in CEPA. They have many uses—some of them hundreds, literally thousands of uses—that result in different types and intensities of exposure.

I will go back to the point I've been making throughout, and that is about bio-monitoring. Tracking over time the level we are finding in people is going to be exceedingly important. We can do all the studies, but if we don't bio-monitor to see whether the levels are going up or down, we'll be missing a critical element.

● (1720)

The Chair: Mr. Watson, did you have another question?

Mr. Jeff Watson: Yes. I want to follow up on this. It's not simply the thimerosal issue, of course; it is still used in the manufacture, and also as a preservative, mind you; it's not just about whether it's present in the actual vaccine itself. We're talking about other compounds that are used in auto antifreeze, embalming fluid—other things like these that go into these things.

The reason I bring this issue up is that we talk about the development of safer alternatives, and yet nobody seems to apply this idea to some of the things that are present in vaccines. They say it is because the benefits outweigh the risks, and that's almost the end of the story on it.

Should we not be pursuing safer alternatives, Ms. Cooper?

Mrs. Kathleen Cooper: The decision to remove thimerosal specifically from childhood vaccines was a precautionary decision to remove the mercury exposure even without full evidence of harm, just as a way preventing additional mercury exposure. I would point to that as a benefit.

I'm out of my league here, though, so I don't want to go on into the other components. I shouldn't go where I don't belong.

You've raised the issue of the messaging about breast milk and contaminants in breast milk. One of the things that have come up as well around these issues is that it's so important to maintain the message that breastfeeding is still the most important and the best way to feed a child long term—absolutely. You have to maintain those messages together. It's very important when you're talking about contaminants in breast milk.

The Chair: Mr. Lussier.

[*Translation*]

Mr. Marcel Lussier: I would like to come back to Mr. Freeman.

I think you didn't have time to elaborate on the issue of restoration of vulnerable areas of the Great Lakes and the St. Lawrence River. Could you take a couple of minutes to tell us about this? How do you propose to establish these vulnerable areas?

[*English*]

Mr. Aaron Freeman: What we've proposed is to grant the minister the authority to designate significant areas that are uniquely exposed to pollution or unique in generating pollution.

We think the Great Lakes Basin would be a primary candidate to be designated as such, because of its importance as the largest freshwater ecosystem in the world, but also in terms of how much pollution is generated in that area and how vulnerable the population is in the basin.

At the same time, we feel there is a need for legislative intervention in Canada to match or try to catch up with the U.S. legislative commitments that have been made to clean up the basin. Canada is far behind in terms of those commitments.

The Great Lakes Water Quality Agreement needs an implementing mechanism federally. We think CEPA is an appropriate vehicle for all of those things, particularly given Canada's record, in terms of how far behind we are not just in legislative commitments but actually, on the ground.

If you look at our facilities versus the U.S. facilities, we contribute toxic air pollution 93% more in our facilities than they do in theirs. In terms of pollution reduction, on the U.S. side they've reduced pollution in the Great Lakes by 45%. We've reduced by 2%. It's negligible.

Overall, that's what we're pushing for, to have CEPA recognized first of all as the implementing mechanism for the Great Lakes Water Quality Agreement, but also as a significant area that needs special attention legislatively.

The Chair: Mr. Ouellet.

[*Translation*]

Mr. Christian Ouellet: Thank you, Mr. Chair.

First, I want to commend Ms. Cooper for saying that the first thing to do in order to reduce the effects on children is to fight poverty. I think this is essential. Unfortunately, you noted that poverty is not a very popular issue with parliamentarians.

I know this is the case because I'm the BQ critic for social housing and homelessness. No one wants to talk about it although it is true that poverty is growing. Poor children are more likely to ingest chemicals since they mostly live inside or on farms where poor conditions exist. They often walk barefoot in mud and dirt, they are exposed to unsafe stoves and so on.

It's easy to say that poverty must be eradicated, but how do you go about that? The Liberal government tried but did not succeed and I'm sure no other government will do any better. This is not the way to do it. You can't just say you're going to eliminate poverty and that you will start right now.

Don't you think that something can still be done such as giving money for better housing or increasing the income of people living on farms? Did you think about other solutions to reduce child poverty?

● (1725)

[*English*]

Mrs. Kathleen Cooper: Yes, but that's not the focus of the work, my own work. You will definitely know more than I do in terms of what needs to be done to reduce poverty across the board, particularly as it affects children. The reason it is included is that I work for a legal aid clinic. It is a major priority of our organization to represent low-income people and, in the broader public interest, to bring those points forward. It's also because in the literature—mostly in the United States but increasingly in Canada—it's very clear that children are at greater risk from lead exposure, from exposure to pesticides, the things you mentioned.

I'm sort of stuck responding to your question because it's not my area of expertise. It's just that I rely on colleagues who advance that and support that work. That's the best way to respond.

The Chair: Finally, we'll go to Mr. Vellacott.

Mr. Maurice Vellacott (Saskatoon—Wanuskewin, CPC): I'll ask a question that I think I know the answer to. You always have to watch those kinds of questions here.

My understanding in respect to reporting to the government by industry on substances is that we concurrently require them, under CEPA, to have that information, but I don't believe that is necessarily required to be verified by an independent third party before it's submitted to the minister. Can you have somebody respond on that?

One of the provisions of the Clean Air Act is that there has to be an independent verification as well, but I need to get a confirmation from somebody here, maybe Health Canada, as to whether that is the case. Does it have to be verified by a third party?

Mrs. Cynthia Wright (Associate Assistant Deputy Minister, Environmental Stewardship Branch, Department of the Environment): You're correct, it does not have to be verified.

Mr. Maurice Vellacott: Okay, then, to the others, quickly, do you think it would be a good idea that it be required to be verified by a third party?

The Chair: Mr. Gaudet.

Mr. Michel Gaudet: Yes, definitely, because from the experience with pesticides, we look at the research that the industry is producing, and that research is secret; nobody knows about it. And when you look at the PCPA, at the margin of safety, the Quebec government came to the conclusion that there were no safety margins, so they banned hundreds of pesticides in the province. That was the only way to protect people.

The Chair: Mr. Freeman.

Mr. Aaron Freeman: We would certainly support that. In our larger submission, we have a series of recommendations relating to the National Pollutant Release Inventory that include better auditing and verification, but also making the reporting more comprehensive. For example, certain forms of mining waste, which form a huge segment of the pollution stream, are not reported under NPRI. These were recently added to the Toxics Release Inventory, which is the U. S. counterpart, and what you saw were huge increases in the volumes as a result of that inclusion in the reporting regime.

Mr. Maurice Vellacott: So you would agree with enhanced auditing provisions? You would agree with that third party verification?

Mr. Aaron Freeman: Yes.

Mr. Maurice Vellacott: Thank you.

The Chair: Thank you, Mr. Vellacott.

Thank you very much to our witnesses for appearing on short notice, as has been mentioned. I think we had a very constructive session.

Thank you, members.

The meeting is adjourned.

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