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Chair

Mrs. Deborah Schulte

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● (1100)

[*English*]

The Chair (Mrs. Deborah Schulte (King—Vaughan, Lib.)): Good morning. I will bring the meeting to order and welcome our guests. I also recognize that we have a new MP in the audience with us.

Welcome, Paul Lefebvre. Thank you very much for being with us today.

I'd like to welcome our guests. We have with us today Henry Lickers from the Mohawk Council of Akwesasne. Welcome.

Dr. Henry Lickers (Environmental Science Officer, Environment Program, Mohawk Council of Akwesasne): Thank you.

The Chair: Thank you very much for being with us today.

From the Industry Coordinating Group for CEPA, we have Mr. Amardeep Khosla.

Welcome.

Mr. Amardeep Khosla (Executive Director, Industry Coordinating Group for CEPA): Thank you.

The Chair: With us by video conference is Miriam Diamond, a professor from the Department of Earth Sciences at the University of Toronto.

Welcome, and thank you for joining us today.

We are still on the topic of CEPA, and we will start with Miriam.

You have 10 minutes. Please start.

Prof. Miriam Diamond (Professor, Department of Earth Sciences, University of Toronto, As an Individual): Thank you very much for the opportunity to appear before your committee. I'm very excited about this.

As you said, Chair Schulte, I'm a professor at the University of Toronto. For the past 30 years my research has involved toxic chemicals. I try to figure out their identity. I look at where they're coming from and where they go, and where they end up and how we're exposed.

In 2008 I was privileged to be the co-chair of Ontario Toxics Reduction Scientific Expert Panel that had a word in bringing in the Toxics Reduction Act in Ontario. Since 2013 I've been a member of the Chemicals Management Plan Science Committee. I've also acted as a peer reviewer for several assessments conducted under CEPA, part 5.

My second point is that I would really like to commend the scientists and staff at Environment and Climate Change Canada and Health Canada for working hard and diligently and using the best science to bring forward sound judgments for protecting Canada's environment.

Next, I'd like to raise four points that reiterate or emphasize those raised by my colleagues, Professor Dayna Scott from York University, and Joe Castrilli and Fe de Leon from the Canadian Environmental Law Association.

I'll just briefly go over those four points. First, I recommend adopting a more precautionary approach into CEPA as a guidepost, using the European legislation, REACH, as a model. Why? It's because science is limited. We have known uncertainties and we have information that we do not know. The scientific evidence is constantly changing, and methods are constantly changing. Adopting a more precautionary approach recognizes the scientific uncertainty, together with changes in the Canadian environment.

Second, as was well articulated by Dayna Scott, we should incorporate principles of environmental justice into CEPA, specifically the protection of vulnerable populations, both in the ecosystem and human populations.

Third, we should increase the onus on industry to provide data for our chemical assessments. This would improve the work flow and the ability of chemical assessors to adjudicate their work. Again, Professor Scott articulated this well.

I would like to make a further point, and that's with regard to the provisions for confidential business information. I do recognize the importance of the provisions for CBI in part 2 of CEPA, but I also believe that a better balance between CBI and the right to know needs to be considered. CBI protects the confidentiality of business interests, the importance of which I recognize, but potentially, it does so at risk to the Canadian public. As seen in the most recent Auditor General's report, CBI and the lack of transparency in product labelling allows products and materials containing CEPA-toxic chemicals to enter the Canadian market.

Fourth, the national pollutant release inventory badly needs to be updated in terms of substances and reporting thresholds.

The next four points I will make have not necessarily been raised by others, but are new points of mine. First, I strongly support the principle of using the best available science in CEPA, but I recommend adopting this as a principle rather than being overly prescriptive in the legislation. I recommend being cautious about overly prescribing methods within CEPA, because it ties legislative compliance provisions now believed to be the best science. In other words, the science that would be prescribed becomes frozen in time and becomes a new anachronism.

The next point is more complicated to describe, so I'm going to take just a few more minutes.

● (1105)

I submit that we need to consider chemicals over the life cycle of the chemical that's used in a product. When CEPA was first envisaged, it was thought that if we stopped production we were taking care of things. Indeed, if you stop production levels decrease, but we do need to take a broader perspective.

I'm going to use one case study, that of the flame retardants penta- and octa-brominated diphenyl ethers, or PBDEs. They were added to schedule I in 2008. PBDEs are used in a whole bunch of stuff. For example, I wouldn't be surprised if the the chair I'm sitting on and the ones you are sitting on contain one of those formulations to retard the flammability. Furthermore, the casings and components of all the electronics in the room you and I are in may very well contain PBDEs that are listed on schedule I.

Many of those products move to the end of life. They go into the waste stream. They're not designated as a hazardous chemical. I totally get that. But they do enter the waste stream, and according to the waste hierarchy, we do not want to dump those but reuse them. So we dismantle our electronics, take the plastic, say, from the casing of your computer and turn it into something new. Okay, that something new. Can you see my kitchen spoon? This is my black plastic kitchen spoon, and I know that many of you probably have a kitchen spoon like this one, and it contains 66 parts per million PBDEs. Now, kitchen spoons are not known to have flammability standards, but, rather, this kitchen spoon probably had an earlier life as a computer or a TV casing. That's why we need to consider a life-cycle approach.

My next point is that I'm always puzzled about the different viewpoints of stakeholders. For example, my colleagues in industry often talk about the need to use sound science and evidence-based decision making, but I've never seen unsound science or decisions made under CEPA that are not evidence-based. I actually think this conversation about sound science and evidence-based decision making is really about the value judgments made on the interpretation of the science. You get the scientific data and then you absolutely need to make a value judgment. Those judgments are normative. But those value judgments need to be taken in the context of the principles of CEPA, and that's why I sort of circle back to my earlier point about better articulating the precautionary principle and environmental justice under CEPA. Those act as guide points through which the data are interpreted and the normative judgments are made.

The final point I'd like to make before wrapping up is about taking a long view of CEPA. I know you do this every five years and this is now the big opportunity, not only to fix the details but also to take the long view. I'm so heartened that your committee looks at the environment and sustainable development. I submit that what we need to do is to more tightly couple environmental protection through the control of toxic releases, through the provisions of CEPA, with sustainable development.

The chemical pollution can be viewed as an outcome of inefficient resource use along the life cycle of that chemical. Chemical releases during manufacturing, for example, represent an economic loss to the manufacturer and a cost to society. Some colleagues say that we should do alternatives assessment so we get the bad actors out. But the problem with alternatives assessment is that we can do a drop-in replacement and we replace one bad actor with another chemical that we have yet to figure out is a bad actor.

The Chair: You have one minute.

Prof. Miriam Diamond: Thanks.

Rather, I think the question that we need to ask is, do we need the function provided by that chemical, and do we in fact need that product?

With the government having a fresh mandate, I maintain that it's time, and I really hope that you foster a cross-country conversation on a vision for Canada's future. Can we find a way forward that combines environmental protection, efficient resource use, and a standard of living for all Canadians? We need to have that conversation, and I argue that we have no choice but to have that conversation, to come together to build a new, prosperous, and safe environment for Canada.

Thank you.

● (1110)

The Chair: Thank you very much. I am sorry to have had to cut in there. I know you have so much to share with us, and I think a lot more of it will come out in the questioning. So thank you.

We'll move now to Mr. Lickers from the Mohawk Council of... Akwesasne.

Dr. Henry Lickers: No, it's pronounced “Akwesasne”.

The Chair: Akwesasne. Thank you.

Dr. Henry Lickers: You got it. It means “where the partridge drums”.

The Chair: I could say that.

Dr. Henry Lickers: Yes. It sounds goods.

I'm really honoured to be here to talk to you today. I've come a number of different times to this type of forum to talk.

I bring greetings from the Mohawk Council of Akwesasne and from the Mohawk people of Akwesasne. We want you to know that we're still on the St. Lawrence River and we're still trying to protect that part of the river where we live.

We've had many different approaches over the periods of time. Our first approach to, at that time, Upper and Lower Canada, was in 1834, when our people, the traditional chiefs, went to the British government and complained about building the Beauharnois control structures and how they would impact the environment in Akwesasne. I think they were promised something like £120,000 for the damages that would be done to the St. Lawrence. They never saw that money, but that was one of the agreements.

We have a long history together on this. The department of the environment at the Mohawk Council of Akwesasne started in 1976, just five years after Environment Canada and six years after the EPA in the United States. Since Akwesasne sits in Quebec, Ontario, and New York State, we work with both federal governments, provinces, and state governments.

The department grew out of problems with fluoride, mercury, Mirex, PCBs, dioxins, dibenzofurans, and a whole raft of things that were coming down the river. The major ones found in our own area were being produced by aluminum companies, by Domtar, and the chemical companies that surround it in Cornwall. We have a good knowledge of where those compounds come from, but as we looked at the problems with these in Akwesasne, more and more we saw that the health impacts on our own people were as important to us as could be.

In 1980 we had a health study carried out and research on the contaminants in Akwesasne: fluoride, mercury, Mirex, and PCBs. Of course we were told at that time by the epidemiologist who worked with us that there would be no way possible to simulate what the mixtures were and what they were actually doing to us since there would be so many different things happening. But we continued, and we still worked on the fish.

We have helped MOECC, now our Ministry of the Environment and Climate Change, and the Ministry of Natural Resources and Forestry to do some of the best fish monitoring in the St. Lawrence River in our area for contaminants, mercury, and those others. We found that the models that were used—and I don't know who to addresses this—to establish and to look at the impacts of these compounds on human beings were using standardized methods. Scientists like standard temperature and pressure because then they can measure one compound and know how it acts. The problem is that it doesn't act that way in the environment.

What happened is that we were able to find that there were many more compounds in the fish. A lot of them, they said, were at safe levels; a lot of them weren't. We actually knew how much fish we ate —I don't look like this from eating a 250-gram portion of fish; I eat probably closer to a kilo of fish, and I tend to like the bigger fish. What happens is that bioaccumulation in those fish make us prime suspects for accumulating those compounds.

After the epidemiological work was done, we were told that, yes, they could find a lot of symptomology but no direct medical dysfunction in the people at Akwesasne. That's not a very nice sort of thing for $7-million health study to come out with, because our people are still suffering from a lot of different diseases like diabetes, cancers, and everything else, which seem to accumulate among the traditional people who are using fish from the river.

● (1115)

No one has been able to tell us yet which way this goes.

We are also working more broadly than just for Akwesasne in that we are also a member of the International Joint Commission. I sit on the scientific advisory board on the science priority committee. We are continuously looking to see what's happening in the environment and how we can work with them.

We've worked with Environment Canada. I sat on the science and technology advisory committee for a number of years in order to advise about impacts within CEPA and things that were happening. The people in our department have good knowledge, working on the environment with the Ministry of the Environment and also Environment Canada.

Today, we have our own environmental assessment process, which we use for all projects within our community, and we coordinate those with projects outside the community, again looking at compounds. We have our own wildlife conservation law, which we apply to everyone, not just Mohawk people but anyone who is fishing or hunting within our territory, so that we can advise them of the compounds we have been able to find in the fish. We also have our own court system, so if people want to act up a little, we can take our own people to court, but we have also had a number of occasions when some other people have had to be looked at as well.

In 1999 when the act was proclaimed, we were really quite pleased to see it. At that time, there was forethought; it was amazing that native people were actually mentioned in the act. The preamble to the act mentioned how we were going to work together and co-operate and merge our knowledge systems to see how we could come up with some solutions. We were very happy about it. We saw it as a victory that the minister had a duty to consult with native people, but in that 16-year period from then to now, the concept of reasonable accommodation seems to have been forgotten about.

It is the duty to consult and to reasonably accommodate aboriginal people in Canada that is most important to the act. I say that because the act itself, while looking at the environment, needs regulatory people and people on the land who know what's going on out there. My people at Akwesasne know every pipe and every ounce of stuff that goes into that river, and they are continuously reporting to us and to the Department of the Environment on what we think are violations. We also continuously report to others who can maybe do something about it.

It is about time that we recognize that, and that we begin to see how we can reasonably accommodate native people to actually help with the monitoring, help with the accommodation or infractions, which is encouraged, and maybe even help with some of the things you find complex within the environment.

There are a number of stories I could tell you about the accommodation we've had with scientists who have come to Akwesasne in order to do sampling. I'll just say that the best fish survey ever done on the St. Lawrence was done because Mohawk fishermen took part in it. The scientists like to say, "We'll get our fish out of this spot" and the fisherman looks at him and says, "No, you'll only get pike out of that one. If you want to get all of your fish, here's the area you're going to have to have as your site". We were able to do that. The integration of traditional knowledge is important.

The other thing I was talking about is the concept of mixtures. Every scientist I talk to says it is so complex that they don't know what to do. If we can send people to the moon and we can cure a lot of diseases, I think it's about time for the Environmental Protection Act to pick up mixtures and look at them seriously. There are many good techniques out there nowadays to look at these mixtures.

● (1120)

In the simple things that we've been able to do, we've been able to find something like a hundred different compounds in the fish we eat, and we're still being told they're okay to consume. Each of them might be just a little below the safe level, but what happens when you put them together, we ask? There's a blank look on their faces.

The last thing I will say is that under the Environmental Protection Act, those responses aren't the only problem that you have with it. Those responses to a compound are just part of the story. You have to move up the hierarchies and scales.

The reason that Canada and the United States have spent $2 billion on policing us at Akwesasne since 1990 is the environment. The environment's impact on our people meant that we could no longer take part in our traditional economies that we had, and suddenly we saw the non-traditional economies come in, which erupted in Oka.

Since that time, we've been dealing with it at Akwesasne. We hope that our partners are there with us.

● (1125)

The Chair: Mr. Lickers, you have so much to share with us, and I am very sorry to have to cut you off. We have this 10-minute limit. Hopefully in the questioning, we can get some more of that good information you want to share.

The last witness is Mr. Khosla.

I just want to thank you for coming back. I know you tried to come to our committee before and had some difficulties, so I really appreciate your coming back and giving us a chance to see you in person.

Thank you.

Mr. Amardeep Khosla: It's a pleasure to be here, Madam Chair.

Good morning to the members of the committee and guests. My name is Amardeep Khosla, and I am the executive director of the Industry Coordinating Group for CEPA, or ICG for short. I thank you for this opportunity to address the committee on aspects of CEPA as you and the government consider the path forward for this important and, we think, remarkably successful legislation.

By way of introduction, as we've not spoken to you before, the ICG has existed for about 30 years. It comprises about 25 industry sectors—the numbers vary from year to year—all of whom are affected by the chemicals-related provisions of CEPA and its regulations, policies, and activities. I will, as a result, focus in my later remarks mainly on the chemicals management plan, or CMP, and the relevant provisions of CEPA—so not all of CEPA.

The ICG is an industry forum for regulatory and technical discussion on matters related to CEPA's regulatory regime regarding substances management. We have several standing meetings a year, additional activities for our focused subcommittees, and biannual meetings with government officials to discuss implementation of the program.

The CMP is a very broad topic, as you know, but I will give you two examples of our work just to give a sense of what we do. We work with officials to find ways to reduce the considerable time and resources companies need to expend in order to track and report on potentially notifiable substances, which are imported, manufactured, or used in Canada, or products containing those substances. As you can appreciate, the effort magnifies as you start to include the products. These are sometimes subject to multiple CEPA requirements, which require being brought together. We work with Canadian and U.S. officials via the binational RCC, the regulatory cooperation council, work plan to identify opportunities for developing common approaches going forward for certain regulatory reporting requirements, called SNAcs and SNURs, relating to the new uses of chemical substances.

The ICG also participates in the national stakeholder advisory council for the CMP. We hold a recurring CEPA update conference, which reaches out to a much wider cross-section of industry. We have 25 associations, and more people come to the conference. Through that we help to build awareness and compliance.

The ICG complements, but does not replace, the functions of our member associations. We do not advocate on behalf of a particular chemical or a group of chemicals, but we do identify and communicate widely held views and concerns with respect to science policy directions or CMP design and implementation. We provide the government with a necessary understanding of the practical impacts of the CMP and CEPA on industry and help make its implementation more efficient and compatible with our main trading commitments, while still achieving environmental goals.

With that as an introduction, let me turn to our main views on CEPA in review and, while doing so, seek to add to what you've already heard from several ICG members, including the Chemistry Industry Association, the Consumer Specialty Products Association, the Mining Association of Canada, and the Canadian Cosmetic, Toiletry and Fragrance Association. I will focus these remarks on key factors that we think have been cornerstones of the CMP's remarkable success and that we believe should be maintained in order for that success to continue. All of these factors work together and are not easily separated from each other without risking, we think, the success of the program.

First and foremost, CMP and CEPA are risk-based. This means decisions are made taking both hazards and likely exposures into account, thereby enabling a more targeted and considered appraisal of what is required to protect the environment and human health than can be achieved from a purely hazard-based approach. This allows limited resources in both government and industry to be used where they are most needed, and not wasted where they're not needed.

To illustrate by way of a trivial example, a large and sharp knife is always a hazard, but we do not control access to kitchen knives by chefs. How a knife is used and under what circumstances, and the practical interventions that might be needed to assure safe use, are essential considerations in any sensible management plan.

Second, CEPA and the CMP set scientifically credible priorities. The government does first what is judged, following consultation, to be most important, and then moves to the next level. These priorities take into account hazard characteristics, such as persistence, bio-accumulation, inherent toxicity, and exposure.

● (1130)

The CMP determined that about 4,300 of the 23,000 chemicals in commerce warranted assessment. However, it is worth noting, because this has come up in prior discussion at the committee, that of the 19,000 that were set aside as not warranting assessment, any of them can be considered again if relevant new information emerges. Of the 4,300, over 2,700 have now been assessed, and the remainder are on track to be assessed by 2020. This is a remarkable achievement. No other country even comes close.

Third, CEPA and the CMP set ambitious yet achievable timelines and transparently communicate progress. As the CMP progresses towards its goals, it also must appropriately employ targeted communications to ensure that its success is recognized by the public.

To continue to deliver, the CMP must continue to be seen as a productive investment of scarce societal resources. These have been quite substantial. For the government alone, it is $100 million a year over 10 years, and for industry I would imagine the number is greater. We don't track it.

Fourth, CEPA and the CMP are principled, yet also appropriately flexible. I am in complete agreement with Dr. Diamond's comments on this. CEPA defines certain tools processes, and principles that guide their application, including the consideration of precaution and the weight of evidence within a risk-based context, and the setting of fixed timelines within which certain critical activities must occur.

Importantly, CEPA also allows important discretion to tailor CMP program elements to suit the need of the task at hand. Some examples are the consideration of vulnerable populations when doing certain assessments, which has been built into some assessments; the consideration of cumulative assessment, where it can be done, to sufficiently similar substances; the recently published five-element assessment framework that the departments are using, which could free up technical resources for those types of assessments that require the most time and effort; or the tailored approach to the collection of information that the CMP has used when executing surveys under section 71.

All of these areas have evolved with the CMP. They have worked with stakeholders, including the ICG, learned from their past activities, and anticipated future needs. They were enabled by CEPA, yet excessive prescription in the act would almost certainly have prevented such an evolution, for the reasons Dr. Diamond outlined. You can't freeze science, common sense, and learning.

The act is static, until it is reviewed, which you are doing. Science is not.

The CMP also has brought together certain authorities under CEPA to create a framework that will allow decisions on certain substances to potentially be reviewed in Canada based on the consideration of new information. This might include such things as new toxicity studies, changes in exposure or use, or new information provided by assessments or management decisions in other key jurisdictions around the world.

Finally, the public credibility of CMP actions is enhanced by placing the responsibility for risk-assessment, and risk management where necessary with the government, and yet also imposing important responsibilities on industry. Government makes the risk assessment decisions based on science, and it considers information from industry and other sources. I would like to stress that government adopts a more conservative approach in assessments when it has less information from industry. It is very much in industry's interest to provide information; otherwise, the precautionary approach that's built into CEPA is brought into play. Where industry does not provide information, the likelihood of a toxic conclusion is greater. Similarly, after consultation with stakeholders, the government makes the necessary risk-management decisions when a substance is assessed as toxic, but it's industry that must integrate those control measures into its existing protective measures, and that integration is a complicated discussion.

● (1135)

To say that CMP is successful, and to point to the elements in CEPA and the CMP that we consider essential to success, is not to suggest that they're perfect and that they cannot be improved. I've already pointed to several improvements in the CMP that officials have made, and we have been part of the consultations on those, but more are no doubt possible.

The ICG members have taken note of the paper recently submitted to you by the departments as well as suggestions made by others who have appeared before the committee. While the time to consider all of these is quite short, we are committed to considering them further over the summer.

Our next update conference, which will reach a wider group of people, is scheduled for September in Toronto, and it may be able to help us broaden our discussion. While the ICG membership is broad, the conference is broader. As a result, we may have additional comments to provide for your future consideration. We trust you will be open to receiving them.

Thank you for allowing us to appear before you today.

The Chair: Thank you very much.

Mr. Amardeep Khosla: I would be happy to answer any questions when we get to that part of the meeting.

The Chair: We're just moving on to that now, so that would be great.

We'll start with Mr. Amos.

Mr. William Amos (Pontiac, Lib.): Mr. Lickers, how would you recommend that traditional knowledge be integrated into CEPA? What would you recommend if our objective is to provide recommendations on legislative reform, regulatory reform, and perhaps program implementation? What would you recommend as the best path towards integrating traditional knowledge?

Dr. Henry Lickers: You could take other environmental acts and look at them. For example, the Species at Risk Act is quite a nice act, and the reason is that native people helped to write it. It wasn't you over there and us over here. It was hands-on, with all six major organizations looking to protect species at risk. Using that knowledge wasn't easy. It took a long time. I would also look at some of the other acts that are successful in doing this to see how they could be merged with the work we do.

There are areas where first nations are going to say that you don't do enough. They would like to find a way to expand the mandate, using science to make sure that what we're doing is useful. I can't say that there's a silver bullet for it, but there are other acts and other things that have been done by the federal government in the last little while that are encouraging.

● (1140)

Mr. William Amos: We've had an ongoing discussion with previous witnesses on the merits of integrating legislatively the protection of vulnerable populations, vulnerable communities, and vulnerable ecosystems. At this point, it would appear that the departments are suggesting that these considerations are adequately incorporated through the risk-assessment process, which is in the implementation stage.

Would you agree or disagree that legislatively we need the law reflect the need to protect vulnerable communities, including Akwesasne for example, as you are downstream from much of the industrial runoff?

Dr. Henry Lickers: Here's one of the problems. For us as native people, we've referred to the Canadian Environmental Protection Act as a Dr. Jekyll and Mr. Hyde act. On the one hand, you say, “Oh yes, we'd like to consult with you”, but then you give us no resources to do that.

Then you end up with this mound of paper on your desk that people want your consultation on or knowledge about and no way to give it, because you can't put the time to it. What I would suggest.... I'd like solutions rather than just complaints about it.

One of the things I would say to you is that, again, I look across the border now, because we sit in Canada and the United States. The United States doesn't always approach everything the right way, but sometimes they do. Their approach to first nations has been that any first nation in the United States who can pick up those responsibilities of the Environmental Protection Act in the U.S. is treated like a state, and funding is given to that first nation in order for it to carry out those responsibilities. What happens, then, is that you end up actually protecting the vulnerable populations of native people.

It doesn't help with.... I'll give you one example: the Vietnamese people who came to Toronto, lived in Toronto, and were eating fish out of the Toronto harbour. It didn't help them because they are a vulnerable population, but really, nobody knew they were doing that. When we were doing our health studies, we had a number of friends who were Vietnamese who came to our health study and asked us to look at them too. I think that on the identification of that, sometimes first nations people are in that line and are friends with those people, and we can start bringing them in.

It's like I said. I don't think every first nation in Canada could pick up this responsibility immediately, but I believe that you have probably 10 communities across the country that could.

Mr. William Amos: Setting aside the issue of capacity to be engaged in meaningful consultation, and focusing specifically on the expertise that is applied by government officials as they're evaluating a particular chemical and its impact in a particular context, would you want them to be required, pursuant to legislation, to examine impacts on vulnerable communities, including indigenous communities, leaving aside whether or not they consult with you in the process of evaluating the impact?

Dr. Henry Lickers: That's the reason I don't use the term “consultation” anymore, because it's more reasonable accommodation, you know?

Mr. William Amos: This is not a consultation question. The question goes to this: should the law require that government take into account the potential impacts of a chemical on an indigenous community?

Dr. Henry Lickers: I would say so.

Mr. William Amos: Thank you.

The Chair: Next up is Mr. Shields.

Mr. Martin Shields (Bow River, CPC): Thank you to the witnesses who are here today. As always, I learn a lot more each day. It's really interesting.

The professor mentioned the adjectives being used. We've heard many scientists saying “sound science”, “true science”, “best science”, and “hard science”, and you're right: we're hearing those adjectives, and they don't help to resolve anything.

On the traditional methods for or knowledge about traditional indigenous species, last night I was reading stories in *Canadian Geographic* about Canadian government scientists collecting information. They were looking for small animals. They went out and set their traps just recently and couldn't find any small animals, and then said that they had all disappeared. The aboriginal person said to take them over on the other side of the hill, where they found a lot. So yes, that's there as well.

But to go back to the chemical industry, my sense is that you described CEPA as legislation that's successful. Could you expand on that?

● (1145)

Mr. Amardeep Khosla: Certainly, Madam Chair. I think I have some numbers here. To the end of 2015, of the 4,300 substances that were identified for assessment, about 2,740 were assessed.

I'm quoting government figures here. Three hundred and sixty-three were substances or groups of substances found to be toxic. That's about 13% or 14%. Seventy-six final risk-management instruments had been published for about 325 substances. That is an order of magnitude greater—or possibly two orders of magnitude greater—than you'll find pretty much anywhere else, and certainly more than we were able to achieve in the 20 years preceding the implementation of the CMP, so it is a huge achievement, I think.

Mr. Martin Shields: Okay, you also talked about examples. You mentioned the knife, and I understand, but you also mentioned that it was just an example. You have other examples. You talked about success with this. Could you share some other examples?

Mr. Amardeep Khosla: I'll just remind you of a case that I think the Mining Association of Canada shared with you in their comments here. It was about copper. Copper is ubiquitous. It's necessary for any number of things, including the transmission of electricity, yet it does have some toxic effects. What does one do with copper when it is so essential not only for practical day-to-day things but also for certain bodily functions? You're not going to ban it. The main sources of releases, I believe, are animals and humans, so you can't really take drastic measures with those. You have to manage it. Taking a simple, hazard-based approach to management would lead you to make very black and white considerations on what to do, whereas a risk-based approach helps you to look at the areas where you're actually experiencing the problems, and then you can tailor your interventions to suit those problems.

Mr. Martin Shields: You talked about improvements to the CMP. I heard you the first time, but could you go back to it again and review the improvements that you would like to see in it?

Mr. Amardeep Khosla: These are actually improvements that the government has already made, and this is just as a practical result of having done all this work. We're the first country to have done it, so there have been evaluations of what has worked and what needs to change. We have started to see cumulative assessment being introduced into the CMP. It's not possible in all cases. It is in some, so for phthalates, for example, a cumulative assessment was done. The whole methodology was developed by the government. It was shared in workshops. Extensive input was provided. That was done without prescription. It was simply recognized as something that needed to happen.

The five-element assessment framework is the one that says if another jurisdiction has looked at it, we'll do a certain type of assessment, and there are five different levels of those assessments that come into play. It allows a very tailored direction of resources to the places that need the most effort. You don't just have one assessment approach for everything.

Then, at the practical level, this question of information from industry is a very expensive topic. We are 2% or maybe less of the global industry, so it's difficult for the tail to wag such a very large dog. We do what we can. We do the best we can on information, but the more we can provide the people we're asking the information from, with confidence that we actually know exactly what it is we want, the more likely we are to get it.

Mr. Martin Shields: That goes to your point about the willingness to supply data. You're willing to supply more, but it needs to be the right data because of the resource issue—but you're willing to supply more.

● (1150)

Mr. Amardeep Khosla: Yes, if the case is made that it is needed for assessment purposes, and it's not just a blanket request for information, but that we take this and make it into discrete chunks of necessary information, I've not heard a single industry say no to doing that.

The Chair: Mr. Cullen is next.

Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP): There was a suggestion earlier by Professor Diamond to take a life-cycle approach to some of the toxins that we're talking about. Does your industry group have a position one way or the other on that?

Mr. Amardeep Khosla: I can't say that we have a position on it. I can say that over the years I've run into many conversations on life-cycle approaches, and they've generally been very supportive of the approach.

Mr. Nathan Cullen: Professor Diamond, we heard from both Dr. Scott, whom you mentioned earlier, as well as an industrial agricultural group, about the different standards that we have here in Canada vis-à-vis the United States, or Europe, on some of these things. Dr. Scott testified that we have the lowest standards for bioaccumulation in the OECD. Is this something that your research has pointed to? Is that something you can confirm?

Prof. Miriam Diamond: Your question was with regard to bioaccumulation and Dayna Scott's comments about the threshold for bioaccumulation. That is an interesting case where the prescription that was written into CEPA, I think in the late 1980s, reflected conditions at the time. Our understanding of what can be considered to be problematic has been refined since then. Other jurisdictions have reduced the threshold for bioaccumulation. In CEPA, the factor of bioaccumulation is a factor of 5,000. In other legislation it is 2,000. I believe that's a case in which we need to update and use the best available science.

Mr. Nathan Cullen: One of the recommendations the committee is meant to consider is that if a group like the OECD or one of our trading partners in Europe or the United States comes with new science, new information about something like toxicity or bioaccumulation, there should be some mechanism within CEPA so we can incorporate that new science rather than rely on something we came up with 20 or 25 years ago. Would you would support that recommendation?

Prof. Miriam Diamond: That would definitely be a recommendation, and it ties in with not being overly prescriptive of the actual numbers, but rather being prescriptive and saying that the best available science needs to be used. It's enshrining the principle of best science.

Mr. Nathan Cullen: I have one last quick question for you. Then I would like to turn to Mr. Lickers for a second.

We also heard in testimony that even when a substance is deemed toxic under CEPA, companies are not compelled to act. I found that testimony a bit surprising, together with the fact that Europe instills a "no data, no market" strategy under REACH and some other provisions. Why does Canada not do this?

Prof. Miriam Diamond: That's a good question I can't answer. I can ask it, yes, but I can't answer it. There are things in CEPA that need to be fixed and that's one of them.

Mr. Nathan Cullen: Mr. Lickers, with respect to this notion of bioaccumulation, we have also heard quite a bit of testimony about vulnerable populations: the very young, the aged, the sick, and first nations people, particularly first nations people who are connected to the land and eating food from the land. I represent northern British Columbia, and this is true for many of the people I represent, who, on some of the evidence, are shown to be more at risk for things like.... If we have worse standards for things like bioaccumulation, and people are being exposed to things like mercury and other toxins in their food source, should there be a stricter and stronger provision within CEPA with regard to specific populations rather than using some generic, standard Canadian of 180 pounds going to the supermarket?

Dr. Henry Lickers: It's one of the things we would look at favourably because the people who are most vulnerable for us are women and children within our communities. So to have somebody looking—it's like a principle in science. When you're measuring something's effect, you don't pick the hardiest to test it against, but you take the stage in life that's going to be the most impacted. You can protect that hardy guy, but if you kill off all the kids your species isn't going to last.

● (1155)

Mr. Nathan Cullen: We've heard testimony that things like these flame retardants we've been talking about and some of the other toxins that we know can have huge effects, particularly on vulnerable populations—in utero, early childhood development.... Indeed, the government has banned certain of these toxins in water bottles, yet they still exist in other parts of the food supply. It seems to be the opposite of a holistic approach, where we're saying this stuff is so dangerous that we're going to make sure it's not in baby soothers and not in water bottles, but it remains in other products that mum ingests and goes into the child that way.

Is there a way within CEPA to start to look at the whole suite of exposure and how that impacts populations like the ones we've mentioned?

Dr. Henry Lickers: I go back to your concept of evidence-based stuff. If a compound is going to be tested and you test it for the strongest people in your society, then you're not fulfilling the testing requirement you want it to be, namely, safe. You should be looking at those who are most vulnerable. For example, you don't test a compound against eels because they can tolerate just about anything; but you test it against trout, a delicate creature, so your testing becomes much more rigorous.

I used one example from Health Canada and some of its risk analysis of compounds, and how it's calculated. For native people, we eat a heck of a lot more fish than that.

The Chair: Thank you. Mr. Bossio.

I'm sorry, Ms. Diamond. The problem is that we ran out of time. I'm hoping that someone else might pick up on that in our questioning. Sorry, we only have so much time for each question, and it's a very scripted time set.

Mr. Mike Bossio (Hastings—Lennox and Addington, Lib.): That's all right.

Professor Diamond, I would be happy to provide you with some of my time to answer that, if you'd like to. If you had a comment you wanted to make, please go ahead.

Prof. Miriam Diamond: Thank you very much.

I would like to say that the way CEPA can be refined is to talk about considerations over the life cycle of an organism; that is, from fetal development to old age, and over the life cycle of a chemical.

However, let me give you one other example. Flame retardant levels are really high in gymnasiums, where kids do gymnastics, because of all the foam that's used. It turns out that one of the most highly exposed populations to flame retardants are little kids who spend 20 hours a week in gymnasiums. I know because my son did competitive gymnastics. I discussed this situation with some risk assessors and they said they don't have a method of looking at this type of population, which is a vulnerable population. To me, that's really remiss because you don't want to look at the average individual, but at little girls with their small body weight who are spending hours in an environment containing flame retardant.

Mr. Mike Bossio: Thank you very much. That was exactly where I was going to lead with the question anyway.

We've talked about life cycle. Dayna's talked about it. I don't know if you know who Philip Jessop is. He's a professor at Queen's who also talks about it. If we look at the life cycle of a chemical or an organism, we almost need to take a hybrid approach between risk assessment and hazards-based assessment in order to be both backward and forward looking. Could you expand on that. What are your thoughts on that?

Prof. Miriam Diamond: This illustrates why we do need to take a precautionary approach. With respect to the life cycle of an organism, we need to be cognizant of the fact, for example, that endocrine modulation effects occur during fetal development, so what we have to do is to be protective of the mom. We can't actually put in provisions to be protective of the fetus; no, we're protective of mom. Was it enough to take bisphenol A out of baby bottles? That provision was not directed at protecting the mom, who could have elevated levels, and result in fetal exposure.

Many of our risk management measures don't actually tackle the most vulnerable windows for toxicity. That's where we need to take a more precautionary approach. I could go on in greater and obnoxious detail, but I'll keep it simple.

● (1200)

Mr. Mike Bossio: To that as well I would add the precautionary principle. Indeed, you spoke earlier about REACH and how new data is becoming available on an ongoing basis, and about the no data, no market type of direction they've taken with REACH, and about other OECD countries.

Would you agree that if we want to really take the precautionary principle when this new data becomes available, we shouldn't necessarily be as prescriptive as to say that we're going to follow that data fully and virtually eliminate or add that chemical to the toxic list, but that there should be a mandatory assessment based on that new data?

Prof. Miriam Diamond: Yes, I agree that there should be a mandatory assessment. It's not even just new data; it's also new interpretations of old data as we understand, for example, more subtle adverse health effects.

Who had previously thought that neurobehavioural effects and cognitive deficits could be related to fetal exposure to certain chemicals? That's new knowledge. We can go back to older data with that new knowledge to reinterpret the data.

Mr. Mike Bossio: Mr. Khosla spoke about the success of the CMP as it exists today, and he referred to some numbers: 4,300 chemicals to be assessed, 2,700 assessments completed, 263 substances listed as toxic. How many chemicals have been added to the toxic list for virtual elimination? I believe it's two.

Mr. Amardeep Khosla: For virtual elimination, I think you're actually getting at one of the difficulties that the government points to in its paper to you about the concept of virtual elimination and how—

Mr. Mike Bossio: Is it correct that the number is two?

Mr. Amardeep Khosla: I think so.

Mr. Mike Bossio: Miriam, would you think that's a great indication of success, that of the 20,000 chemicals that we're being exposed to on a daily basis, only two of those are declared toxic and need to be virtually eliminated?

Prof. Miriam Diamond: No.

Mr. Mike Bossio: Thank you.

You also spoke about—

The Chair: Thanks, Mike.

Mr. Mike Bossio: I'm going to have an opportunity to ask more questions in another round. One that I want you to think about is this. You spoke about alternative assessments to find alternatives and the difficulty in doing that. I'm going to come back in the next round and ask how you think that would work. If we're not going to take that replacement assessment, then how should we handle that?

The Chair: Thank you.

Mr. Fast.

Hon. Ed Fast (Abbotsford, CPC): Again, it's fascinating testimony from all of our witnesses.

I'm going to ask one initial question of Professor Diamond. I'm going to touch on a number of areas you have suggested for improvement and put those questions to Mr. Khosla.

I noted that in your testimony, when you were discussing the review and assessment process, you suggested that there are two questions that need to be asked. One is, do we need the function provided for by that chemical, and two, do we need that product?

Who are you suggesting would actually make that assessment of whether a product or chemical is needed?

Prof. Miriam Diamond: I suggest that we have to open the conversation to consider whether we need things. We're coming up against resource constraints, and I'm talking globally. We're coming up against constraints—

Hon. Ed Fast: Because my time is short, I just wanted to hear who should do that.

Prof. Miriam Diamond: Who should do that? Okay. We need to open that conversation, and it can opened within CEPA because I believe that we have to move CEPA beyond a chemical-by-chemical approach, to consider if the chemical-by-chemical approach is working in totality. Because the total number of chemicals is increasing, total emissions and production are increasing, thus total exposures are increasing.

● (1205)

Hon. Ed Fast: My concern is this— and I'm simply editorializing here. If the choice of which products will be available for production and use and sale in Canada is made by government, we're now talking Big Brother. We're talking about an Orwellian approach. That's something you won't see our side of the table favouring at all.

If you can provide me with greater detail on exactly what you meant by those suggestions, I'd be glad to consider them.

My questions for Mr. Khosla, though, are focused on Ms. Diamond's testimony. She recommended a number of areas of improvement for CEPA. One was that we should be adopting a more rigorous precautionary approach—you may want to make a note of that—and second, that environmental justice principles should be incorporated that address a broader array of vulnerable populations. Third, the NPRI needs to be updated for thresholds in substances, and that there's a responsibility on industry to provide better and more data.

Do you disagree with any of those in principle? If so, why? If not, could you expand a little bit?

Mr. Amardeep Khosla: On the precautionary approach, I think it's a question of interpretation, and the interpretation that is most broadly held in the world is one that was developed during the Rio environment meetings in 1992. That is the interpretation that, I think, underlies much of the government's application or precaution. It's been the subject of a very wide department-wide consultation in the 1990s, and we think it's the right approach. So, yes, precaution is built into CEPA. It should be based on a commonly held view of what precaution should be.

On vulnerable populations, as I've said, I think they are already being taken into account. We would certainly be willing to consider the extent to which they should be further built into CEPA. We note that the government's paper recommends the preamble. That's something we will take a look at and can certainly provide you with a written comment on, if you wish.

On the NPRI, I said earlier that the act is static until reviewed. Things should be reviewed. So when it's ready in its cycle to be reviewed, I would certainly hope that we will have an intelligent conversation about how it needs to be changed. If that means some substances need to be added, some need to be dropped, thresholds need to be changed, we should have that conversation. I think CEPA already enables that. I'm not sure it's an amendment to CEPA that's required. It's common sense.

On industry data, ask my colleagues; we provide lots of it. I come back to this point about our being about 2% of the market. With regard to the Europeans' REACH approach, which is very data intensive and very expensive, I would think that every time that is raised in front of this committee, you should be asking the question, “Show me the evidence that it works”.

I have given you some evidence that CEPA works. If you judge it by whether we ban something, which is what virtual elimination essentially means, then I guess you would be more critical of its success. If you judge it by whether we've taken the actions that are needed to reduce environment and human health risks to the levels where they are acceptable, then I think it's a resounding success. Focusing on the extremes doesn't help anybody. I think we should be looking at the broad impact of the act and whether it's doing what it needs to do.

If I may editorialize just a little, I very much like Dr. Diamond's example of the gym. It's a perfect illustration of why a risk-based approach is needed. If you took a hazard-based approach to flame retardants, you might go down one path. If you take a risk-based approach, in your risk management discussion, you are able to consider what to do about the gym, if somebody raises it.

The Chair: Mr. Bossio, you have your second go.

Mr. Mike Bossio: So, Miriam, what have we done about the gym?

● (1210)

Prof. Miriam Diamond: Nothing; we haven't done anything about the gym.

Mr. Mike Bossio: Great, thank you.

Mr. Khosla, as far as the precautionary approach is concerned, you're saying it was established in the 1990s and that nothing has changed since the 1990s, that we can't do a better job of doing it?

Mr. Amardeep Khosla: Madam Chair, I am saying that the way in which we should be applying precaution, because it is such a values-based concept, is something that needs to be very firmly grounded in how other people also see precaution and apply it. So I am saying that—

Mr. Mike Bossio: So if other people do see—

Mr. Amardeep Khosla: So I am saying—

Mr. Mike Bossio: So if other people do see—

Hon. Ed Fast: Madam Chair, I believe the witness should be allowed to answer the question.

Mr. Mike Bossio: He did provide an answer.

The Chair: But I think he did give an answer. I know time is short, so we're trying to get a lot out of a very short period of time.

Mr. Mike Bossio: I don't mean to give offence, Mr. Khosla. It's just that I have limited time and I need to get this information out.

Mr. Amardeep Khosla: Please continue.

Mr. Mike Bossio: If more data emerged from another jurisdiction, a respected jurisdiction, an OECD country, that did show impacts from a given chemical, do you agree that a mandatory reassessment should then undertaken? If we take the precautionary principle at its value, as you've stated, should we have a mandatory reassessment of that chemical?

Mr. Amardeep Khosla: Madam Chair, in a large program like the CMP, you have to set priorities. So I have two parts to my answer. One is that, in principle, the answer is yes; meaningful new information should be considered. The second part of my answer is that you have to do that in a priority-driven scheme. There's a lot to be done, so as new information comes in, periodically the government departments have already indicated in the CMP that they will be applying what they call their “feeders framework”.

I think there are seven different streams of information they look at, and they do that continuously. Down in the bowels of the departments, they're doing that continuously. Once in a while, they will bring it all together into a proposal on what to do next.

Mr. Mike Bossio: You mentioned there would be a conference for this fall. What was the name of that conference?

Mr. Amardeep Khosla: It's called the CEPA Update Conference. It's something we hold every 18 months.

Mr. Mike Bossio: Miriam, will you be at that conference?

Prof. Miriam Diamond: No, I haven't even been made aware of it.

Mr. Mike Bossio: Is Dayna Scott going to that conference? Sorry. If you're not aware of the conference, you probably wouldn't know him.

Prof. Miriam Diamond: No.

Mr. Mike Bossio: Okay, thank you.

The Chair: The conference is done by industry—it's just an industry conference.

Mr. Amardeep Khosla: It's an industry conference, yes.

Mr. Mike Bossio: Oh, I see.

The Chair: Correct.

Mr. Mike Bossio: I thought it was something that was brought—

The Chair: Mike, you had asked a question before and kind of left her to answer it.

Mr. Mike Bossio: Yes, I would like Miriam to answer it.

Prof. Miriam Diamond: Yes, it was about alternatives assessment. I think alternatives assessment is definitely important in getting bad actors out. I note that under part 5 of CEPA, for example, a bunch of flame retardants are bundled together to allow assessors to figure out which alternatives are better than others, given the fact that we have flammability standards requiring those flame retardants. What I caution against is over-prescribing alternatives assessments. We don't want to replace one chemical with another that provides a useless function. For example, we often require a hazardous property for a chemical that has to provide durability.

Can you not hear me?

The Chair: Yes, we can hear fine.

Prof. Miriam Diamond: The whole scope of alternatives assessment needs to be cast very broadly. We want to know whether we need that function at all before we just replace one thing with another. That was my caution with respect to alternatives assessment. Cast it broadly.

Mr. Mike Bossio: Thank you.

To take it back to Ed Fast's question earlier, how would you prescribe that we perform that assessment?

Prof. Miriam Diamond: I would get people together to discuss how to move that assessment forward. I don't have the best answers now, but I know that a lot of people are working on it. In the U.S., the National Academies of Sciences, Engineering, and Medicine came out with a large report on alternatives assessment. So other people have considered it. It's time we did something similar.

● (1215)

Mr. Mike Bossio: If I can invite you to provide written—

Prof. Miriam Diamond: Avail ourselves.

Mr. Mike Bossio: Right, if you could provide a written response to my question, it would be greatly appreciated.

Mr. Khosla, you mentioned earlier that industry wouldn't be opposed, in principle, to a life-cycle analysis being performed. Do you think that industry would be more favourable to a life cycle that would create a hybrid of risk-based and hazard-based approaches as a way of looking at chemicals so that we do fully operate under this precautionary principle?

Mr. Amardeep Khosla: I've been very clear that we support a risk-based approach and that any assessment of alternatives should occur within such an approach. That tends to happen as a matter of design. It doesn't happen every time, but when it's important enough, it happens within the risk- management discussion.

Mr. Mike Bossio: A hybrid-based approach would provide more certainty in how we approach chemicals and what we do with them once we have uncovered data that shows what the outcome of those chemicals could be once we know how they affect the environment and human health. Do you not feel that industry would be willing to consider that type of approach?

Mr. Amardeep Khosla: There are so many ifs in that statement that I'm not sure how to answer it. If you apply a risk-based approach, you can consider both hazard and exposure. Applying a risk-based approach does not mean you cannot consider hazard. You can.

Mr. Mike Bossio: Why is—?

The Chair: Mike, I have to stop it here, I'm sorry to say.

Mr. Amardeep Khosla: It's a matter of the weight you assign to it.

The Chair: Okay, thank you.

Mr. Eglinski.

Mr. Jim Eglinski (Yellowhead, CPC): There was a question I wanted to ask earlier, but I'm going to throw it aside right now, because a couple of very interesting points have come up. I would like to thank Ms. Diamond for rattling my mind when she started talking about public places such as arenas.

A number of years ago when I was a mayor, I built a new sports complex in northern British Columbia. It was two hockey rinks surrounded by an indoor speed-skating facility, which was number two in Canada, and above that was a walking track. I remember that the contractor kind of screwed up and didn't quite get the dimensions right for an international speed-skating track, so they decided to change the foam.

They came up with a derivative of one foot of foam that was as good as the three feet of foam that the international committee required. It was for people doing 80 miles an hour around a corner if they lost control. He said that the one foot would now do what the three feet would do.

I remember a consultant I had hired sent him a simple question. He said, “Fine, but bring a dozen sheets, put them on the ground, jump from the third floor, and prove to us that the product is going to work”. They went back to the drawing board. It was a very interesting scenario in which science told us it was going to work until we asked science to prove it, and they backed out very quickly.

Mr. Khosla, you talked about the change that we saw in CEPA and you said that you feel we're working very well with industry and with CEPA. We talked about the vulnerable population out there. I have foam all around this arena, and the top has a big rubber track that people walk on. How will we use those recent inventory updates that tell us the current status of substances and stuff like that in the Canadian commerce and the likely exposure scenarios?

Here is where I'm going. You as industry develop a product for the market. CEPA gives you and works with you for the guidelines. You then sell the product to what I'll call a developer in the best scenario, who then places it in a structure, a building, or a vehicle, or whatever he is going to do. Is there a responsibility and does industry take responsibility—and you're the first line— to ensure that the users down the road...? I think this falls in with what Mr. Lickers was saying about people down the road and how they're going to be involved with that chemical or the substance that may be in the building. Asbestos is a prime example.

● (1220)

Mr. Amardeep Khosla: There is a substantial transmission of information down the line. It's not complete, but it does happen through material safety data sheets. There are transmissions of information down the line to major customers, which many major suppliers engage in.

Also, in the new substances area, there is a requirement for information to be transmitted to customers down the line. I think CEPA built that in for new substances, because early on that was where we tended to focus. It's with the CMP that has been broadened over the last 10 years or so to look much more at existing substances. The question of how information for existing substances can best be transmitted is something we do need to look at.

The conference that we have has a significant focus on that exact question, because you can only submit information that you can receive, and much of what we receive comes from outside of the country. So the awareness of CEPA outside of Canada matters a great deal.

I think the bilateral discussions we're having with the U.S. on supply-chain communication are going to be very helpful to us. There is also the fact that President Obama has on his table, as of yesterday I think, the new Toxic Substances Control Act replacement, which is heavily influenced by what we've done here in Canada. Significant parts of CEPA have been evaluated within that act process.

I think all of that is going to help us to get the attention of offshore suppliers in particular and to get better information. So this is something we're all very interested in to help make a better process.

Mr. Jim Eglinski: Do I have time?

The Chair: You have 20 seconds, so I think you are pretty well out of time.

Mr. Jim Eglinski: I just want to ask, is there a due diligence for industry and government to make sure that information gets out further? I am talking about the general public.

Mr. Amardeep Khosla: There is certainly a lot of effort in that area, absolutely. There is a great deal of effort being expended in that area.

Mr. Jim Eglinski: Thank you.

The Chair: Mr. Amos, go ahead.

Mr. William Amos: I want to go back to Ms. Diamond. My learned colleague, Mr. Fast, was raising the spectre of Big Brother, this sort of Orwellian governmental oversight situation, in relation to the discussion of what chemicals are necessary. I think this is a really important point that I would love to hear a bit more about from you.

My editorial on it would be that the government does have a duty to regulate. I think this is clear from the statute as it exists already. We can't assume that there is going to be some invisible hand of the private marketplace that is going to achieve the protection of society, let alone of society's most vulnerable. We have to ensure that our legislation is keeping up with modern times and we are assessing how effective it is on the ground.

What do you think could be reformed in CEPA, in terms of legislation or regulations, in the context of this issue of choosing what chemicals are necessary? I do appreciate that there is an argument out there that the private sector needs to be able to evaluate what is necessary. Is there a public role? What is it? How does that look?

Prof. Miriam Diamond: The public role is to advance consideration of the chemical mixtures that we all experience, and that the environment experiences. CEPA takes the chemical-by-chemical approach to adjudicate according to set criteria. What CEPA isn't able to do and doesn't get a handle on is the totality, what is out there in total in the Canadian environment.

There is a mismatch here. You go, “You know what? We have done a great job on a chemical-by-chemical basis. We don't have hazard quotients above one on a chemical-by-chemical basis.” However, there is evidence out there to suggest that the totality of exposures could be causing adverse effects. These two pieces of information don't match.

What are we going to do? We have to have better consideration, then, of the totality of chemicals. Some would say cumulative risk assessment. I agree with my colleague, Mr. Khosla, who said that phthalates have now been bundled together to do a cumulative risk assessment for phthalates. That is a great first step. What it still doesn't get to is the totality of chemicals to which we are all exposed. Science is really struggling on this. We can get people to the moon, but this is really difficult.

What we can say is that, by putting provisions into CEPA to examine the totality of chemical emissions and effects, we demand that science move forward on this. When we put that into CEPA, we provide an impetus to work toward getting methods and answers.

● (1225)

Mr. William Amos: Is this why alternatives assessment is so important—because, through the regulatory mechanisms and the implementation of the statute, it is very hard to get at how all these chemicals, in their various mixes at various stages of life, impact us? Is it for that reason that we need the alternatives assessment approach?

Secondarily, what lessons have we learned from the U.S. National Academy of Sciences report that you mentioned in relation to alternatives assessment?

Prof. Miriam Diamond: I think what we have learned is that we definitely need alternatives assessment, because we can't have regrettable substitution. “Regrettable substitution” is kind of the name of the game with respect to taking out bisphenol A and replacing it with what we think is more toxic, bisphenol S and some of the other bisphenols. We definitely need alternatives assessment.

As I said earlier, we have to frame alternatives assessment broadly, to look at not just the drop-in replacement chemical, but whether we can actually change functionality. Can we change the nature of the product?

This is a paradigm shift from the chemical-by-chemical approach toward saying that we have some real issues going on here with sustainability and that we need to be asking questions in a bigger sense. We are not cutting it with the chemical-by-chemical approach, so can we move the conversation?

We can't do it all in today's hearing, but what we can do is open up the conversation to change the paradigm. We are living in a 1980s paradigm of chemical by chemical.

Mr. William Amos: I appreciate those comments, and I agree that we can't achieve it in today's conversation. However, we will, as a committee, be considering recommendations, and I think this is the locus for that conversation. If you or any other colleagues who are experts in this area have suggestions as to how we get there, this would be the time and place to make those submissions.

I do want to go quickly to Mr. Khosla on the issue—

The Chair: You have 30 seconds.

Mr. William Amos: On the NPRI, suggestions have been made that it be expanded so that it gets down to a postal code level, as is done with the toxic release inventory in the U.S. We don't have that in Canada. Canadians aren't aware, in their backyards, of what they're being exposed to and by whom. Would you agree that this is a useful expansion of the NPRI?

Mr. Amardeep Khosla: I'm afraid we don't really deal with the NPRI in my group, so I can't answer that question.

Mr. William Amos: I'd ask for just a yes or no, then, from Ms. Diamond.

Prof. Miriam Diamond: Is the question whether we should have postal code level NPRI releases?

Mr. William Amos: Yes. Should the public have access to that?

Prof. Miriam Diamond: Yes.

Mr. William Amos: Thank you.

The Chair: I'm sorry, but you're over six minutes.

Mr. Cullen.

Mr. Nathan Cullen: Professor Diamond, what type of national strategy does Canada have to deal with mercury? Or do we have one?

Prof. Miriam Diamond: Oh, that's a really interesting question, because Canada is a signatory to the Minamata Convention, as you know, which is tasked with controlling releases of mercury. It's very timely that you mention this. Canada has been involved in reducing mercury emissions through the International Joint Commission, for example, the binational task force that operated some 10 years ago but actually hasn't been doing much since then.

That's been directed toward point-source releases, but the reason that I'm glad you asked that question is that right now there's a very visible discussion about what's happening at Grassy Narrows First Nation, where they have been subject to elevated mercury exposure due to past releases, and it does not seem to have been adequately addressed. We're addressing mercury and releases in a very big-picture way, but here we have a case that we're not acting on, a very immediate and very egregious case in which people are experiencing mercury poisoning.

● (1230)

Mr. Nathan Cullen: Mr. Lickers, there's a whole field of study about environmental racism, in which the environmental standards that get applied to different groups are of a different level. There is Grassy Narrows and there are some other examples—Akwesasne might be one—where we see these outcomes and these exposures downriver from certain pollutants. Cancer rates are high. There are all sorts of strange and particular illnesses, we know that, within some of the communities around the oil sands.

We've seen these elevated risk levels, yet there doesn't seem to be the same hue and cry that there would be if those same risk levels were suddenly showing up in downtown Montreal, Toronto, or Vancouver. Is this something that CEPA needs to address?

Dr. Henry Lickers: I think it does. Maybe the reason they're not showing up in Montreal or these bigger cities is that the people there have more money.

Mr. Nathan Cullen: What do you mean by that?

Dr. Henry Lickers: You have a thing called “healthy worker syndrome”. If you have a good job and a good life, you could be exposed to these compounds and you may not show anything. However, if you don't have a good life and your society is stressed already, then you start to see these strange problems and these strange clusters of things that occur. That's what I would call them. At Akwesasne, we've been looking at that for a long period of time.

Mr. Nathan Cullen: Mr. Khosla, there was an exchange about this notion of cumulative risk.

I dealt with phalates in a bill that I moved through Parliament earlier. We really struggled with some industry reps who were raising alarm bells about any replacements. In terms of this notion of totality of risk exposure, at the end of the day that's what CEPA is meant to do: to protect people so they don't get sick from being exposed to the normal passage of life, to eating food and being around products.

Is that something the industry group would be advocating for as well? Or does that go too far beyond what you're willing to commit to?

Mr. Amardeep Khosla: Madam Chair, I agree with Professor Diamond that we're at a paradigm shift—I think she used those words—and I would call it an inflection point in terms of—

Mr. Nathan Cullen: Inflection...?

Mr. Amardeep Khosla: We're at an inflection point in terms of our ability to use new approaches that are enabled by high throughput screening, by computational toxicology, and by a better understanding of mode of action and how chemicals can trigger the same sequence of events within a body to result in a particular toxic effect. All of that is the subject right now, I think, of several billion dollars worth of work in the U.S. It is moving very fast. I think it is something that the Canadian government has been watching quite closely. It is engaged both bilaterally on it and through the OECD and can monitor that work and understand how it might be applied in a regulatory context.

The science has to be ready for it to be applied in a regulatory context. You have to have the confidence in the new approaches, that they can replicate at least what the old approaches did, and then go beyond those. I think all of that is happening. So the question for us, I think, is how to be part of that and to make sure that we can pick up the best developments as they happen. The OECD is probably an excellent place to do that, but possibly there's some bilateral work that could be done as well.

The Chair: I have to cut it off at that point. It has been excellent testimony from everyone, and there's never enough time for this type of discussion. It's a very important discussion and, obviously, there are widely varying views on how we might tackle this.

As we've always said to our other witnesses, if there is something further that you want to share with us that we didn't get a chance to get to in the session today, please feel free to send us that information or those recommendations. We are receiving recommendations and suggestions for how to move forward, so we would very much appreciate that.

I want to thank you, Mr. Lickers for returning, because I know you got halfway here and were stopped at the border last week. We appreciate very much your persistence in coming back here.

We're now going to do some committee business, so we have to ask you to clear the room. But again, thanks to everyone for a great session.

[*Proceedings continue in camera*]