

Mr. Keith Chanon
Program Manager
North American Commission for Environmental Cooperation
393, rue St-Jacques Ouest
Bureau 200
Montréal (Québec)
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October 20, 2005

Re: Children's Health and the Environment in North America report

Dear Mr. Chanon,

On behalf of the National Wildlife Federation (NWF), please accept these comments concerning the draft report by the North American Commission for Environmental Cooperation (CEC), *Children's Health and the Environment in North America: A First Report on Available Indicators and Measures* (hereafter "draft report"). NWF represents over four million members and supporters in the U.S. devoted to protecting wildlife, people and wild places. We appreciate the CEC's efforts to help identify environmental threats to children's health as well as possible options to reduce those threats.

We have two major issues with the current draft of the report. The first concerns mercury contamination. While the report appropriately addresses priority children's environmental health issues such as asthma and elevated lead exposures, there is essentially no reference to mercury. Reference is made to mercury, including releases and exposures, in the separate country reports document, but inexplicably only in the Canadian section.

Mercury is by far the most common cause of fish consumption advisories in both the U.S. and Canada (76 percent of U.S. advisories in 2004 were issued at least in part due to mercury contamination),¹ and is gaining increasing attention as an environmental health threat in Mexico. Based on 1999-2000 blood mercury data collected through the U.S. National Health and Nutrition Examination Survey (NHANES), it has been estimated that annually over 300,000 newborn babies in the U.S. are at risk for neurodevelopmental delays due to elevated methylmercury exposures in the womb.² Though we are not aware of similar national assessments in Canada or Mexico, smaller studies have identified some populations at risk for higher mercury exposures (in particular individuals from First Nations and immigrant communities).³

¹ U.S. EPA, National Listing of Fish Advisories, Fact Sheet, EPA-823-F-05-004, Sept. 2005.

² This number could be twice as high if the general pattern of higher umbilical cord blood than maternal blood is assumed. See Mahaffey K.R., Clickner R.P., and Bodurow C.C. 2004. Blood Organic Mercury and Dietary Mercury Intake: National Health and Nutrition Examination Survey, 1999 and 2000, *Environmental Health Perspectives*, 112(5):562-570.

³ See for example Cole D.C., Kearny J., Sanin L.H., Leblanc A., and Weber J.P. 2004, Blood Mercury Levels Among Ontario Anglers and Sport-Fish Eaters. *Environmental Research*, 95:305-314; and review in Chan H.M.,

Mercury releases to the environment have been subject to numerous regulatory and voluntary initiatives throughout North America over the past two decades, and the CEC has recognized the importance of addressing this heavy metal by developing the North American Regional Action Plan on Mercury.

In spite of this widespread recognition of the threats to children's health from environmental mercury exposures, the only mention of mercury in the draft report itself is in the context of drinking water contamination. Except in unusual circumstances, non-occupational exposure via drinking water is minor for inorganic mercury, and negligible for methylmercury, the form of greatest concern in the environment due to its greater potential to bioaccumulate to high levels in fish.⁴

Given the clear threats to children's health posed by mercury exposures (in particular methylmercury exposures *in utero* and after birth), the CEC should include mercury as a priority chemical contaminant in its children's health and the environment initiative, including providing a section on mercury in the final version of the report. In fact, in Resolution 02-06, Cooperative Agenda for Children's Health and the Environment in North America, the CEC Council called for biomonitoring for lead *and* mercury through the North American Regional Action Plan process.⁵ At a minimum, the additional material could include reference to (and results to date for) the NHANES national exposure assessment in the U.S., as well as other efforts involving monitoring for mercury exposures (in particular for children and women of childbearing age) in North America (similar to data presented in case studies on lead exposures in Ontario and northern Mexico).

The second concern with the draft report is on the identification of actions needed to address environmental threats to children's health (Section 6). We believe the draft report appropriately notes that the "reduction/elimination of environmental risks to children's health is the ultimate goal." (P. 104). The draft report also references data collection efforts on environmental releases of toxic chemicals (i.e., through national toxic chemical release inventories). But the action items do not highlight the importance of linking sources and exposures, and how the indicator information may be more useful in determine the best intervention measures. In addition, the recommendations do not mention the importance of identifying exposures to chemicals of emerging concern.

We believe the report can be strengthened by having action items calling for:

- More research linking sources and exposures (i.e., through better understanding of environmental cycling, dietary patterns, and other factors that effect children's exposures to toxic chemicals)

Scheuhammer A.M., Ferran A., Loupelle C., Holloway J., Weech S. 2003, Impacts of Mercury on Freshwater Fish-Eating Wildlife and Humans, *Human and Ecological Risk Assessment*, 9(4):867-883

⁴ See for example U.S. Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry, Toxicological Profile for Mercury (Update), March 1999; Gochfeld, M., 2003, Cases of Mercury Exposure, Bioavailability, and Absorption, *Ecotoxicology and Environmental Safety*, 56:174-179.

⁵ CEC Council Resolution 02-06, included as Appendix 1 in *Children's Health and the Environment in North America, Public Review Draft*, adopted 19 June, 2002.

- Increased emphasis on measures to protect sub-populations with the highest exposures. The draft report appropriately calls for increased surveillance, but this should be coupled with identification of appropriate measures to reduce exposures (in particular at the source end) affecting children in communities at greater risk for elevated exposures
- Ensuring that there is the potential in any biomonitoring program to consider including new chemicals, when evidence arises indicating the potential for children's exposures to chemicals of emerging concern (e.g., brominated flame retardants or any other persistent chemicals that may pose health risks)
- An emphasis on the role of precautionary action by governments concerning chemical uses and releases where warranted (rather than waiting for a biomonitoring program to confirm the presence of chemicals at levels that may pose health threats, at which point exposure reductions may take many years to achieve)

We appreciate the effort by the Commission for Environmental Cooperation to integrate biomonitoring and other efforts in children's health and the environment between Canada, the U.S. and Mexico, and believe that in addressing the points above, the effort can be even more fruitful.

Sincerely,

Michael Murray, Ph.D.
Staff Scientist