

PUBLICATION ANNOUNCEMENT



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Note: (1) The appended portable document file (PDF) contains the text of the entire declaration with nontechnical summaries of the principal findings. (2) The journal *Ambio* can be viewed online at <http://ambio.allenpress.com/ambioonline/?request=index-html>. *Ambio* subscribers can view the entire issue; others may view only the abstracts. (3) Additional information about the Madison conference—including unedited, full-length videotapes of all four panel presentations—is available at www.mercury2006.org.

Scientists Declare Mercury Pollution Poses Serious Global Threat

MADISON, Wis. (8 March 2007)—A declaration by the world’s leading mercury scientists summarizing the serious global threats posed by mercury pollution was published today in a special issue of the international science journal *Ambio*.

“The Madison Declaration on Mercury Pollution” stems from four expert panels assembled at the Eighth International Conference on Mercury as a Global Pollutant held last August in Madison, Wisconsin. It presents 33 principal findings from five supporting papers prepared by panel members and published in the same issue of *Ambio*.

The papers summarize what is presently known about the sources and movement of mercury in the atmosphere, the socioeconomic and health effects of mercury pollution on human populations, and its effects on the world’s fisheries and wildlife. Five key findings in the declaration were:

- On average, three times more mercury now falls from the sky than before the Industrial Revolution 200 years ago.
- Unregulated use of mercury in small-scale gold mining is polluting thousands of sites around the world, posing long-term health risks to an estimated 50 million inhabitants of mining regions and contributing more than 10 percent of the mercury in Earth’s atmosphere attributable to human activities.
- Little is known about the behavior of mercury in marine ecosystems and methylmercury contamination of marine fishes, the ingestion of which is the primary way most people at all levels of society worldwide are exposed to this highly toxic form of mercury.
- The health risks posed by mercury-contaminated fish warrant a general warning to the public—especially children and women of childbearing age—to be careful about how much and which fish they eat.

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- Methylmercury levels in fish-eating birds and mammals in some parts of the world are reaching toxic levels, which may lead to population declines in these species and possibly in fish as well.

“The policy implications of these findings are clear,” said Dr. James Wiener, a Wisconsin Distinguished Professor at the University of Wisconsin-La Crosse and technical chair for last summer’s conference. “The declaration and the detailed analyses of the five supporting papers clearly demonstrate the need for effective national and international policies to combat the environmental mercury problem.”

Published by the Royal Swedish Academy of Sciences, *Ambio* (www.ambio.kva.se) is widely recognized as an important international forum for debate on scientific, social, economic and cultural issues affecting the human environment.

Wiener said the Madison Declaration summarizes a year-long effort by many of the world’s leading mercury scientists, assembled into four conference panels, to review and synthesize mercury science findings. All members of the scientific panels endorsed the declaration, he said. All 1,150 participants at the conference were invited to express their confidence in the experts’ findings, and Wiener said the vast majority of those who did so agreed with the expert panels’ conclusions.

Other major findings in the declaration include:

- Mercury emissions from developing countries have increased during the last 30 years, offsetting decreases in emissions from developed nations.
- Much of the mercury deposited near a given industrial point-source of mercury comes from that source rather than distant or natural sources.
- There is now solid scientific evidence of methylmercury’s toxic health effects, particularly to the human fetus.
- New evidence indicates that methylmercury exposure may increase the risk of cardiovascular disease, particularly in adult men.
- Increasing mercury concentrations are now being found in a number of fish-eating wildlife species in remote areas.
- The actual socioeconomic costs of mercury pollution are probably much greater than estimated because existing economic analyses don’t consider mercury’s impacts on ecosystems and wildlife.
- The concentration of methylmercury in fish in freshwater and coastal ecosystems can be expected to decline with reduced mercury inputs; however, the rate of decline is expected to vary among water bodies, depending on the characteristics of a particular ecosystem.

Besides Wiener, conference organizers included James Hurley of the University of Wisconsin-Madison Sea Grant Institute, David Krabbenhoft of the U.S. Geological Survey and Christopher L. Babiartz of the UW-Madison Water Science & Engineering Laboratory. UW Sea Grant, USGS and UW-La Crosse were among the major sponsors of the 2006 conference.