In advance of mercury treaty adoption,

Hair testing shows link between fish consumption and higher mercury exposure

[Tuesday 1 October 2013, Brussels/Seville] In advance of a new global treaty on mercury, a

new report by the Zero Mercury Working Group [i] (ZMWG) has highlighted the importance of the treaty being ratified as soon as possible to reduce global mercury pollution and human exposure to mercury. The treaty is expected to be signed by many of the world's governments in early October near Minamata, Japan where a major mercury poisoning incident was first discovered in the 1950's.

Civil society organisations from 9 countries, including Spain, participated in the ZMWG hair testing project in order to ascertain mercury levels in women of child bearing age and to raise awareness about reducing exposure to mercury, a dangerous neurotoxin.

"We collected samples from both rural and urban women," said Leticia Baselga of Ecologistas en Accion, Spain, "Fish consumption in Spain is one of the highest, at 6.7 fish meals per week, and samples analysed showed a clear link between fish consumption and higher mercury exposure."

The study results revealed that women of childbearing age in several countries have mercury levels of concern, most likely due to high consumption of mercury-contaminated fish. Overall, nearly one-quarter (24%) of the samples exceeded the widely recognized U.S. Environmental Protection Agency (EPA) guideline of 1 microgram per gram (µg/g).

Furthermore, in 4 of the 9 countries a high percentage (defined as more than 20%) of all samples from women of child bearing age exceeded this threshold, specifically:

- 64% of those tested in Spain;
- 71% of those tested in Japan;
- 36% of those tested in Mauritius; and
- 23% of those tested in Côte d'Ivoire.

"The results indicate that the mercury hair levels in Spanish and Japanese women of childbearing age were significantly higher than the other countries tested," said Dr. Takashi Yorifuji, Associate Professor at Okayama University Graduate School of Environmental and Life Science, Japan. "Risk of adverse health effects in children following in utero methylmercury exposures is well documented and rises as maternal exposure increases."

While most exposure studies have been conducted in developed countries, much less is known about exposures in other regions of the world, according to the report.

“It’s imperative to expand capacity to assess exposure variations worldwide,” said Michael Bender, ZMWG International Coordinator and main author of the report. “Hair analysis is a well-documented method that can be used to assess recent exposure to methylmercury. It also lends itself well to civil society participation, as this pilot project clearly demonstrates.”

“Elena Lymberidi-Settimo, EEB/ZMWG International Coordinator said “Governments should measure concentrations of mercury in fish and issue advisories on safe quantities to eat, especially to protect women of childbearing age, children and those who eat large quantities of fish.”

Minamata disease was caused by the release of mercury into industrial wastewater from Chisso Corporation’s chemical factory from 1932 to 1968. Over 2,000 people died from consuming contamined fish from the bay. Although victims’ groups and experts believe the number afflicted is far higher, thus far 10,000 Japanese have received financial compensation resulting from their exposure.

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Background reading:

ZMWG Report - Assessing hair mercury levels of women of childbearing age in 9 countries: A civil society pilot project

Mercury Contamination, Exposures and Risk:A New Global Picture Emerges, December 2012

Mercury Contamination, Exposures and Risk:A New Global Picture Emerges, December 2012

BRI - Report Mercury in the Global Environment: Patterns of Global Seafood Mercury Concentrations and their Relationship with Human Health

Democophes- human biomonitoring at a European scale, http://www.eu-hbm.info/euresult/media-corner/press-kit

Economic benefits of methylmercury exposure control in Europe: Monetary value of neurotoxicity prevention http://www.ehjournal.net/content/12/1/3

URL: http://www.eeb.org/EEB/?LinkServID=8BC714FD-5056-B741-DB5B755F31809770

[i] The **Zero Mercury Working Group** (ZMWG) is an international coalition of over 95 public interest environmental and health non-governmental organizations from more than 50 countries from around the world. *ZMWG strives for zero supply, demand, and emissions of mercury from all anthropogenic sources, with the goal of reducing mercury in the global environment to a minimum. Our mission is to advocate and support the adoption and implementation of a legally binding instrument which contains mandatory obligations to eliminate where feasible, and otherwise minimize, the global supply and trade of mercury, the global demand for mercury, anthropogenic releases of mercury to the environment, and human and wildlife exposure to mercury.*
http://www.zeromercury.org

The European Environmental Bureau (EEB) is Europe's largest federation of environmental citizens' organisations. It is the environmental voice of European citizens, standing for environmental justice, sustainable development and participatory democracy. Our aim is to ensure the EU secures a healthy environment and rich biodiversity for all.
www.eeb.org

Ecologistas en Acción is a confederation of more than 300 ecologist groups all over Spain that defend social ecologism, which understands that environmental problems originate in the current production and consumption models. www.ecologistasenaccion.org