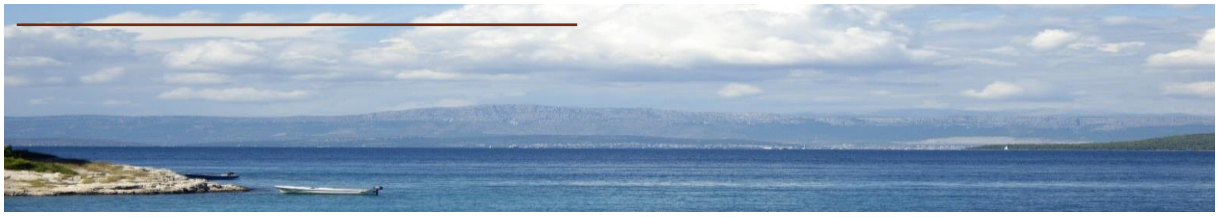
UNEP Global Mercury Partnership

Mercury Air Transport and Fate Research Area

Partnership Area Leads: ***Nicola Pirrone*** *(*National Research Council of Italy, CNR-IIA)
David Evers *(*Biodiversity Research Institute, BRI)



Issue

A global understanding of major processes and mechanisms affecting the dynamics of mercury in the atmosphere and interfaces with other ecosystem compartments, particularly biotic, is crucial for setting management and monitoring strategies for mercury at local and global levels. Integrated and updated assessments, based on reliable and comparable monitoring data in abiotic and biotic media, from governments, international networks, and other sources, are essential for improving the global understanding of the movement of mercury through ecosystems and for predicting spatial and temporal trends.

Objective

The partnership aims to assist UNEP, future parties to the Minamata Convention and any other stakeholders to better understand the transport and fate of mercury in global ecosystems, geographic patterns, temporal trends, and risks to human and ecological health.

Strategy

The partnership will emphasize the following actions to further strengthen information flow and assist the future implementation of the Minamata Convention:

- accelerate the development of sound scientific information on global mercury monitoring, cycling and its patterns
- enhance generation and synthesis of scientific information on ecosystem transport and fate of methylmercury to fish, wildlife, and people
- facilitate compilation and sharing of such information among stakeholders
- develop an information document for assisting the Secretariat and all interested parties to evaluate the effectiveness of the Convention
- translate scientific information to better inform policy decisions with relevant international organizations, groups and programs.

Contribution to Implementation of the Minamata Convention

The partnership provides comprehensive technical expertise on multiple Articles within the Convention, particularly Articles 19 and 22. The partnership is developing projects that contribute to evaluate the effectiveness of the Convention, including materials on science-based monitoring of mercury across all global ecosystems.

Mercury Air Transport and Fate is addressed in **Article 8**, **9, 12, 14, 17, 18, 19, 21 and 22** of the Convention

Outreach Activities

The partnership has contributed to the preparation of the "Global Mercury Assessment 2013: Sources, Emissions, Releases and Environmental Transport" and the Technical Background Report for consideration by Governing Council/Global Ministerial Environment Forum at its twenty-seventh session" in 2013. The partnership has also contributed to the 2010 United Nations Report on Mercury of the UNECE Task Force on Hemispheric Transport of Air Pollution, and to many other publications.

Featured Projects

The partnership, with UNEP and WHO collaborators, will develop standardized approaches for monitoring mercury both in the environment and humans to accurately determine their concentrations globally. A second project in partnership with UNEP, BRI and IPEN will conduct similar work with an emphasis in southeast Asia.

Future Work to be Carried out to Support Implementation of the Minamata Convention

All projects currently proposed to UNEP or GEF contribute toward the partnership's objectives and strategy, with particular emphasis on Articles 19 and 22.

The Global Mercury Observation System (GMOS, www.gmos.eu) is a first attempt to conduct worldwide measurements of mercury from both natural and anthropogenic sources. The GMOS is a five year project (2010-2015), funded by the European Commission, led by the CNR-IIA. The Project aims to establish a worldwide observation system for the measurement of atmospheric mercury in ambient air and precipitation, as well as in biota. More than 24 partners with on-going programs in USA, Canada, China, and Japan are involved.

Mercury Connections – Global is based on a proven approach in North America by BRI that gathers key scientists and their data to develop peer-reviewed summary papers that can serve as the basis for synthetic policy-oriented documents. Proposed is an information document on monitoring that can be used by UNEP and member countries.

The Society of Environmental Toxicology and Chemistry is partnering with BRI to propose the development of a Centralized Mercury Platform, which is hoped to be linked with UNEP Live or a similar internal portal, through funding from UNEP-STAP.

In collaboration with UNIDO and key ministries in Mexico, BRI is developing a proposal for Hg monitoring in the major Mexican watersheds draining into the Gulf of Mexico. The project will help identify biological mercury hotspots and also use Hg stable isotopes to identify different sources of Hg entering the Gulf.

Collaboration with Other Partnership Areas and Relevant Stakeholders

As a partnership co-lead, BRI is coordinating with the ASGM partnership to develop a manuscript to connect control measures and evaluation approaches over three different time periods for key Articles in the Convention. The partnership is also collaborating with many research institutions, organizations, programs and partnerships, including the Group on Earth Observations (GEO) working at global level.

For More Information

Visit our web site:
http://www.unep.org/chemicalsandwaste/Mercury/GlobalMercuryPartnership

Or contact the partnership area leads:
pirrone@iia.cnr.it
david.evers@briloon.org