

Report on activities undertaken within the UNEP Global Mercury Partnership (2007-2008)

May 2009

A report of the UNEP Global Mercury Partnership Advisory Group

Mercury partnerships were initiated in 2005 by the United Nations Environment Programme (UNEP) Governing Council and formalized in 2008 through the development of the Overarching Framework for the UNEP Global Mercury Partnership. New partners are encouraged to join the Partnership.

Further information is available at:
http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm or
e-mail the UNEP Mercury Programme at mercury@chemicals.unep.ch .

Introduction

The Overarching Framework of the UNEP Global Mercury Partnership specifies that one of the responsibilities of the UNEP Global Mercury Partnership Advisory Group is to report on activities undertaken within the UNEP Global Mercury Partnership. The following document is a report of the partnership activities in 2007-2008. It reflects input received from the partnership areas in the 2007-2008 partnership area evaluations.

Under the Global Partnership, **six partnership areas** have been established, including: mercury releases from carbon combustion; mercury cell chlor alkali production; mercury in products; mercury transport and fate research; and mercury in artisanal and small-scale gold mining, mercury waste management. Some activity has been initiated for primary mercury supply and mercury storage, although no partnership areas are formally established.

Development of the Overarching Framework

As specified in UNEP Governing Council Decision 24/3, UNEP developed an **overarching framework** for the UNEP Global Mercury Partnership in consultation with Governments and stakeholders. The overarching framework was finalized at the 1-3 April 2008 Meeting of Partners held in Geneva.

The overarching framework establishes an **overall goal** for the UNEP Global Mercury Partnership: to protect human health and the global environment from the release of mercury and its compounds by minimizing and, where feasible, ultimately eliminating, global anthropogenic mercury releases to air, water and land.

Business plans are called for in the overarching framework. Such plans have been drafted for the following established partnership areas:

- (a) Artisanal and small-scale gold mining;
- (b) Mercury cell chlor-alkali production;
- (c) Mercury air transport and fate research;
- (d) Mercury-containing products;
- (e) Mercury releases from coal combustion;
- (f) Mercury waste management.

In response to needs identified in UNEP Governing Council Decision 24/3, partnership area business plans have been drafted by UNEP in collaboration with key stakeholders for the following areas:

- (g) Mercury Supply and Storage;
- (h) Non-Ferrous Metals Production.

This report provides a list of the highlights of partnership area activities. The partnership area business plans provide a full list of current partnership area work. Business plans are available on the UNEP Global Mercury Partnership web-site at the following web-address: www.chem.unep.ch/mercury/partnerships/new_partnership.htm.

A. Artisanal and small-scale gold mining

The United Nations Industrial Development Organization (UNIDO) is acting as lead in the artisanal and small-scale gold mining partnership area. The objective of this partnership area is the continued reduction and elimination of mercury uses and releases in artisanal and small-scale gold mining. The partnership area has set a target of a 50 per cent reduction in mercury demand in artisanal and small-scale gold mining by the year 2017.

Key activities in this area include:

- Two UNEP “country strategic plan” projects, one in South-East Asia (focused on Cambodia and the Philippines) and the other in South America (focused on Peru and Bolivia) funded by the Quick Start Programme under the Strategic Approach to International Chemicals Management (SAICM);
- Construction of installations to capture mercury vapour released during gold processing in the Amazon region and global dissemination of information on the technology being used (technology developed by the United States Environmental Protection Agency and the Argonne National Laboratory and manufactured locally);
- Partner efforts to implement a West Africa regional mercury reduction project, including current work in Senegal to reduce mercury exposures and health impacts, led by the United States of America and UNIDO.

B. Mercury cell chlor-alkali production

The United States of America is acting as lead in this partnership area. The objective of this partnership area is to minimize significantly and, where feasible, eliminate global mercury releases to air, water and land that may occur from chlor-alkali production facilities.

Key activities in this area include:

- The World Chlorine Council annual reporting to UNEP on mercury emissions and consumption in the chlor-alkali industry. The data provided is estimated to cover about 85 per cent of the world chlorine production capacity based on companies using mercury and is available on the UNEP mercury programme website;
- Russian chlor-alkali project to minimize mercury emissions and use, to ensure environmentally-safe management of mercury-containing waste and to provide opportunities for ultimate conversion to non-mercury technologies.

C. Mercury air transport and fate research

Italy is acting as lead in this partnership area. The objective is to increase global understanding of international mercury emissions sources, fate and transport by accelerating the development of sound scientific information to address uncertainties and data gaps in global mercury cycling and its patterns (e.g., air concentrations and

deposition rates, source-receptor relationships, hemispheric and global air transport and transformation and emission sources), by enhancing information sharing among scientists and between them and policymakers and by providing technical assistance and training, where possible, to support the development of critical information.

Key activities in this area include:

- Development of a fate and transport partnership report that describes the state of the science on global emissions, air monitoring, and air modeling, provides an overview of mercury in atmospheric processes on hemispheric and global scales and identifies research needs;
- Field-testing of the toolkit for the identification and quantification of mercury releases in the Asian region, through funding from the UNEP Mercury Trust Fund.

D. Mercury-containing products

The United States of America is acting as lead in this partnership area. The partnership area objective is to phase out and eventually eliminate mercury in products and to eliminate releases during manufacturing and other industrial processes via environmentally sound production, transportation, storage, and disposal processes. Numerical targets have been set for 2017 for various product categories (including batteries, lamps, dental amalgam, measuring and control devices, electrical and electronic devices and others such as cosmetics, pharmaceuticals and traditional and ritual uses).

Key activities in this area include:

- Health-care projects aimed at reducing the use of mercury-containing measuring and control devices, including projects in Argentina, Chile, China, Costa Rica and Mexico;
- Work by the Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal to build capacity and promote best management practices for addressing mercury waste collected from health care products and in other sectors addressing mercury in products;
- “Mercury in products” awareness-raising workshops in Latin America and Asia in 2006 and 2007;
- Mercury inventory and risk management planning activities sponsored by the United States of America and implemented through the United Nations Institute for Training and Research in Chile, Ecuador, Panama and South Africa.

E. Mercury releases from coal combustion

The International Energy Agency (IEA) Clean Coal Centre is acting as lead in this partnership area. The objective of this partnership area is the continued minimization

and elimination of mercury releases from coal combustion where possible. While at this stage no numerical targets are established for this partnership area, this may be revisited with the finalization of the UNEP report on atmospheric emissions, which features information on trends. This report should enable the partnership to make a more advanced assessment of a baseline scenario and project a future target.

Key activities in this area include:

- Guidance material to promote reductions of mercury emissions from coal combustion initiated, in particular the development of BAT / BEP guidance for mercury emissions from coal;
- A 3 year project was developed to start in 2009 with funding from the European Commission aimed at reducing mercury emissions from coal combustion in the energy sector. More specifically the project will aim to:
 - develop guidance material on how to optimize multi-pollutant control techniques, including green-house gases and energy efficiency to reduce mercury-emissions;
 - collect information to improve accuracy of future emissions inventories for the sector;
 - implement pilot studies to demonstrate efficiency of co-beneficial techniques and to build local/national capacity on these issues, also with the aim of transferring information and lessons learned to facilities and governments in other countries.
- Publication of the IEA Clean Coal Centre document, “Economics of Mercury Control”;
- Publication of the European Cement Association worldwide data compilation on the status of mercury emissions from cement kilns;
- Joint work by the Russian Federation and the United States of America to develop low-cost technology for improved air pollution control at power plants in the Russian Federation.

F. Mercury waste management

The Government of Japan is acting as lead in this partnership area, which was initiated in early 2008. The objective of the partnership area is to minimize and, where feasible, eliminate unintentional mercury releases to air, water, and land from waste containing mercury and mercury compounds by following a life cycle management approach. The first face-to-face meeting of the waste partnership area took place from 12-13 March 2009 to promote the exchange of information among partners and other issues, such as the consideration of indicators.

Key activities in this area include:

- Development of BAT/BEP guidance for implementation of important parts of the Basel Convention Technical Guidelines on Environmentally Sound Management of Mercury Waste led by the Government of Japan;

- UNEP Chemicals project ‘Management of Mercury and Mercury Containing Waste’ to increase the technical capacity in assessing, managing and reducing the risks to human health and the environment posed by mercury and mercury-containing waste in Burkina Faso, Cambodia, Chile, Pakistan, and the Philippines; and
- Secretariat of the Basel Convention’s project, ‘Development of Capacity Building and Technical Assistance Programme to reduce and prevent pollution from mercury’ to prepare national mercury waste inventories and management plans in Argentina, Costa Rica, and Uruguay.

G. Non-ferrous metals mining

A draft business plan, prepared by UNEP in collaboration with key stakeholders, is posted on the website of the Chemicals Branch of the UNEP Division of Technology, Industry and Economics at http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm.

No activity has been initiated in this area. No lead has been identified for this partnership area. A lead is necessary for coordinated activity to be actively pursued in this area.

H. Mercury supply and storage

A draft business plan, prepared by UNEP in collaboration with key stakeholders, is posted on the website of the Chemicals Branch of the UNEP Division of Technology, Industry and Economics at http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm.

Key initial activities in this area include:

- Primary mercury mining project in Kyrgyzstan sponsored by Switzerland, the United States of America and Norway;
- Mercury storage projects initiated in Asia and South America, sponsored by Norway.

No lead has been identified for these areas. A lead is necessary for coordinated activity to be actively pursued in these areas.