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Global Mercury Partnership
Partnership Advisory Group
Second meeting
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Report on activities undertaken within the UNEP Global Mercury Partnership (January 2009 – June 2010)

Note by the Secretariat

The Overarching Framework of the UNEP Global Mercury Partnership outlines 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 Chemicals Branch of the UNEP Division of Technology, Industry and Economics has drafted a report on activities within the UNEP Global Mercury Partnership, which is set out in the annex to the present note. The current version reflects input received from the partnership area evaluations.

The Partnership Advisory Group may wish to discuss and provide input on the report on activities.

Annex

Draft report on activities undertaken within the UNEP Global Mercury Partnership (January 2009 – June 2010)

10 August 2010

A draft report prepared by UNEP

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 by contacting the UNEP Mercury Programme at mercury@unep.org .

I. Introduction

1. 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 from January 2009 – June 2010. It reflects input received from the partnership areas in the 2009 partnership area evaluations.

2. Under the Global Mercury Partnership, seven partnership areas have been established, including: mercury in artisanal and small-scale gold mining, mercury cell chlor alkali production, mercury transport and fate research, mercury in products, mercury releases from coal combustion, mercury waste management and mercury supply and storage.

3. 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.

II. Global Mercury Partnership Participation

4. The number of official partners is steadily growing:

- On 1 January 2009, there were 23 official partners in the Global Mercury Partnership, including 6 governments, 2 intergovernmental organizations, 7 non-government organizations, and 8 others.
- As of 30 June 2010, there were 70 official partners in the Global Mercury Partnership. The Global Mercury Partnership is currently comprised of 15 governments, 4 intergovernmental organizations, 31 non-government organizations, and 20 others.
- Some of the partners are global industry partners that collaborate and represent a large number of national associations. In addition, the Partnership works with a number of stakeholders that have not yet officially joined.

5. A new partnership area on mercury supply and storage was established in April 2010.

A. Artisanal and small-scale gold mining

6. The United Nations Industrial Development Organization (UNIDO) and the Natural Resources Defence Council (NRDC) are jointly leading the artisanal and small-scale gold mining partnership area.

7. The objective of this partnership area is the continued reduction and elimination of mercury uses and releases in artisanal and small-scale gold mining (ASGM). The partnership area has set a target of a 50 per cent reduction in mercury demand in ASGM by the year 2017.

8. Key activities in this area include:

(a) Promoting mercury reduction:

- The United States of America and the Argonne National Laboratory (ANL) continue to disseminate the low cost, easily constructible Gold Shop Mercury Capture System (MCS) for gold processing shops. Recently they have supported pilots in several areas of Peru, in both Amazonian and Andean regions. The technology is now being disseminated through a series of workshops and demonstrations around the country, hosted by the Ministry of Energy and Mines of the Government of Peru;
- The United States of America is intending to fund a project in Peru to demonstrate small scale, mercury-free gold mining. Some of the partners are likely to apply for the implementation of this project;
- AGENDA for Environment and Responsible Development (AGENDA) of Tanzania is implementing a project “Training of Trainers on alternatives of mercury and Best Available Techniques (BATs) and Best Environmental Practices (BEPs) in Artisanal and Small Scale Mining in Tanzania (Phase III)” as from, February 2010 to June 2010. The objective of the project is to ensure that important

information on available alternatives of mercury as well as good practices is shared and passed on to artisanal and small scale miners through their regional associations as well as zonal mining officers (representatives of the Ministry of Energy and Minerals) and hence feed into government policy planning system for effective and efficient mercury phase out on mining activities in Tanzania. Furthermore, the project also liases with the World Bank funded project 'Tanzania Sustainable Management of Mineral Resources Project' which has one component (Component A) aimed at helping artisanal and small scale miners, including gold miners. Part of this work will entail helping the miners improve environmental practices, including improving mercury management;

- Senegal partnered with the United States of America, UNIDO, the Blacksmith Institute, and local NGOs to reduce the use, emissions, and health effects of widespread mercury use in the gold mining region of eastern Senegal, near Tambacounda. Beginning with a baseline assessment of mercury use by field miners, partners developed and implemented a plan to train community-based NGOs and health workers on appropriate technologies for mercury capture and reuse, and safe mercury management techniques;

- Artminers, Institute for Sustainable Mining, works to introduce Cleangold (mercury free) mining products to ASGM communities. In 2009, Cleangold experienced its largest expansion to date, selling directly to hard rock and placer miners, with greatest growth occurring in South and Central America. Cleangold technology is now in 32 countries and new distributors in South and Central America have emerged;

(b) Gold Standards:

- The Standard Zero of the Alliance for Responsible Mining (ARM) was recently approved by both the ARM and Fair Trade Labelling Organization (FLO) board of directors. It is a set of standards that cover social, economic, labor, environmental, and trading aspects of ASGM. Miners that adhere to the standards can be certified as Fair-trade and Fair-mined Certified gold. These standards underwent substantial public consultation, including input from several of the ASGM Partnership members. Any ASGM organization wanting to become certified under these standards, can now apply to FLO-CERT;

- EARTHWORKS has conducted a comparison of standards of several leading initiatives working on responsible ASGM. This publicly-available report, "The Quest for Responsible Small-scale Gold Mining," includes a comparison of initiatives standards on mercury use in small-scale gold mining;

(c) Strategic Planning:

- Two UNEP "country strategic plan" projects are underway, 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). In support of these efforts, UNEP has drafted a Guidance Document 'Developing a National Strategic Plan for Artisanal and Small Scale Gold Mining' that is being field tested in the pilot countries. It is available in English, French and Spanish;

- A regional ASGM workshop in Franco-West Africa took place in December 2009 in Mali. There were participants from Mali, Burkina Faso, Côte d'Ivoire, Guinea, Niger and Senegal. The workshop was funded by the Government of Finland and UNIDO. The United States of America intends to fund follow-up strategic planning activities in the region.

(d) Awareness raising and information exchange:

- Mercury Watch Data Base is dedicated to collecting, analysing and publically providing information about ASGM and mercury use in countries. It is maintained by the Artisanal Gold Council and includes recent updates funded by UNEP;

- At the Communities and Small-scale Mining (CASM) annual meeting held in Mozambique in 2009, several of the ASGM Partnership members organized a

workshop on reducing the use of mercury in ASGM. About 30 participants representing a cross-section of miners and mining associations, government officials, academics attended**.** In addition to the workshop, the Artisanal Gold Council also presented a half-day hands-on demonstration of mercury capture and gold refining for small scale gold miners. They also invited local miners to come to the conference venue and demonstrate their mining techniques; and

- The United States of America with help from UNIDO and other partners organized a "Learning Center" at the U.N. Commission for Sustainable Development, May 2010, on the topic of mercury use and mercury reduction in ASGM. The Learning Center provided three hours of training to participants from all over the world on best practices and strategic planning to address mercury use in the sector.

B. Mercury cell chlor-alkali production

9. The United States of America is acting as lead in this partnership area.

10. 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.

11. Key activities in this area include:

(a) 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. The American Chemistry Council has also drafted an updated inventory of mercury plants around the world, now under review by partners;

(b) Mexico is encouraging a private company (IQUISA-CYDSA) to pursue their interest to get funds to switch to membrane cells at their two plants in Mexico, and has encouraged the company to attend the international mercury meetings in the recent years to meet contacts and organizations useful to their purpose. They have also provided UNEP and the United States of America with a summary of what their needs are, seeking orientation on the options for them to consider. Partners will seek to meet with relevant financing organizations to explore possibilities for and obstacles to financing of conversions;

(c) Information material on best practices for areas such as mercury balance, reducing mercury releases, and ensuring worker safety have been collected and are posted on the UNEP website for information sharing;

(d) The United States of America and the Russian chlor-alkali industry have partnered for a number of years to reduce mercury releases in wastewater and improve mercury monitoring systems. These efforts continue to reduce releases to the environment by about 1 ton per year.

C. Mercury air transport and fate research

12. Italy is acting as lead in this partnership area.

13. 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.

14. Key activities in this area include:

(a) Development of a 5-yr research project funded by the European Commission aimed at building a Global Mercury Observation System (GMOS) to monitor mercury levels in the environment. The project was approved as part of the EU 7th Framework Programme for Research and Development and will commence in November 2010;

(b) Recent updates of the toolkit for the identification and quantification of mercury releases, funded by Denmark, based on initial experiences using it. It includes a new and simplified 'Inventory Level 1' with calculation spreadsheets and a reporting template. In addition, 'Inventory Level 2' is an updated version of the original toolkit, giving a comprehensive description of all mercury sources;

(c) The partnership published the report 'Mercury fate and transport in the global atmosphere: Measurements, models and policy implications'. The report 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.

D. Mercury-containing products

15. The United States of America is acting as lead in this partnership area.

16. 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).

17. A face-to-face meeting of the partnership area took place in April 2010 in the United States of America.

18. Key activities in this area include:

(a) On-going health-care projects aimed at reducing the use of mercury-containing measuring and control devices, including projects in Argentina, Brazil, Chile, Costa Rica, Ecuador, Honduras, Mexico, Nepal and Tanzania;

(b) Five year project (to 2012) with 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. Projects are focused in Argentina, Costa Rica and Uruguay and funded by the United States of America;

(c) On-going 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

19. The International Energy Agency (IEA) Clean Coal Centre is acting as lead in this partnership area.

20. The objective of this partnership area is the continued minimization and elimination of mercury releases from coal combustion where possible. No numerical targets are established for this partnership area.

21. Key activities in this area include:

(a) A Draft Process Optimisation Guidance (POG) document has been prepared for mercury control at coal-fired facilities funded by the United States of America. The draft report has been circulated to interested parties. It is expected that the POG document will be fully completed by late 2010;

(b) A 3 year project has been initiated with one million Euros in funding from the European Commission aimed at reducing mercury emissions from coal combustion in the energy sector. The project aims 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.

Implementation status of the project is as follows:

- The project has funded supplemental work to support further developments to the POG document identified in (a) above and will fund the translation of the POG into Chinese and Russian;
- The Ministry of Environmental Protection and Tsinghua University in China are currently completing one of the largest ever projects to evaluate the mercury content of coals in China and to estimate current and future emissions from the coal utility sector, similar updates of this type of information are being produced in South Africa and Russia;
- Projects demonstrating mercury reduction at two coal-fired power plants are being implemented in Russia. These projects should be completed by the 3rd quarter of 2011. One of the demonstration projects is co-funded by the United States of America;
- The United States of America has provided further in-kind assistance to complement the European coal project carrying out mercury measurements at two plants in South Africa. A similar campaign will be undertaken in Russia. This work will help improve the accuracy of the South African and Russian coal mercury emission inventories.

F. Mercury waste management

22. The Government of Japan is acting as lead in this partnership area and collaborates closely with the Basel Convention.

23. 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.

24. The second face-to-face meeting of the waste partnership area took place in March 2010 to promote the exchange of information amongst partners and other issues, such as the consideration of measurable indicators to monitor progress.

25. Key activities in this area include:

(a) The fifth draft of the Basel Convention Draft Technical Guidelines on Environmentally Sound Management of Mercury Waste was presented for consideration at the seventh session of the Basel Convention Open Ended Working Group in May 2010. Preparation of the fifth draft was funded by Japan;

(b) Development of BAT/BEP guidance for implementation of important parts of the Basel Convention Technical Guidelines on Environmentally Sound Management of Mercury Waste funded by Japan. The guidance includes case studies and aims to assist developing countries with implementation of waste management activities;

(c) UNEP Chemicals project 'Management of Mercury and Mercury Containing Waste' funded by Norway finished in June 2010. Its purpose was 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;

(d) Five year project (to 2012) with 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. Projects are focused in Argentina, Costa Rica and Uruguay and funded by the United States of America (also noted under the products partnership area); and

(e) The UNEP Chemicals project on "Technical and economic assessment of mercury-containing tailings" (2009) produced the "Report on technical and economic criteria for processing mercury-containing tailings (April 2010)" authored by GRS (Germany), which summarizes the issue of the presence of mercury and other heavy metals from ore mining. It provides information and case studies on the design, management and remediation of mercury containing tailings. Further, feasibility studies were undertaken by Chile and Ghana.

G. Mercury supply and storage

26. The Zero Mercury Working Group is acting as interim lead in this partnership area, which was initiated in April 2009. A government lead, or co-lead, is being sought for this partnership area.

27. The supply and storage partnership area contributes to the objective of minimization and where feasible, elimination of mercury supply considering a hierarchy of sources, and the retirement of mercury from the market to environmentally sound management. It has set a target to reduce the global supply of mercury by 50% by 2013, when compared to the supply available in 2005.

28. Key activities in this area include:

(a) Primary mercury mining project in the Kyrgyz Republic sponsored by Switzerland, the United States of America and Norway. The Government of the Kyrgyz Republic operates the last remaining primary mercury mine known to export mercury. Action to assist the Kyrgyz Republic has been recognized as a priority by the international community. On the national level, the Kyrgyz Republic project is led by the State Agency of Environmental Protection and Forestry in cooperation with other government agencies and stakeholders through the Inter-ministerial Working Group established for this purpose. Activities have been jointly coordinated by UNEP, UNDP, UNITAR and ZOI Environment Network;

(b) Mercury storage projects initiated in the Asia-Pacific and Latin America and the Caribbean regions, sponsored by Norway. Reports estimating the quantities of excess mercury expected in these regions through 2050 are available. Other activities in these regions include selection of Executive Committees and preparation of additional analyses of the options available for long-term sequestration of mercury.