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Global Mercury Partnership
Partnership Advisory Group, Sixth meeting
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Draft Report on Progress of the UNEP Global Mercury Partnership (July 2012 – June 2014)

Note by the Secretariat

The Overarching Framework of the UNEP Global Mercury Partnership outlines one of the responsibilities of the Partnership Advisory Group is to report on overall progress of the Partnership to the UNEP Executive Director.

Annexed to the present note is the *Draft Report on Overall Progress* that was developed by UNEP with input from the partnership areas for the time period of July 2012 – June 2014.

To encourage the work of the Partnership in the next reporting cycle, the Partnership Advisory Group may wish to review the *Draft Report on Overall progress* and provide feedback both to UNEP on the report as it is finalized and to the partnership areas in moving forward.

In doing so, the Partnership Advisory Group may wish to also keep in mind the individual partnership area business plans (**UNEP Hg/PAG 6.6**), information shared at this meeting, and relevant information from the Intergovernmental Negotiating Committee.

UNEP Global Mercury Partnership
Draft Report on Overall Progress
July 2012 – June 2014

Introduction

The Operational Guidelines of the Overarching Framework of the UNEP Global Mercury Partnership specify that one of the responsibilities of the Partnership Advisory Group is to report on overall progress to the Executive Director. Related to this, UNEP is to facilitate reporting on progress to governments, including the UNEP Governing Council or its subsidiary bodies, as appropriate, and the partnership areas are to report biennially to UNEP in accordance with the UNEP reporting format.

Reporting is to include tracking of partnership activities and partner contributions as well as assessing effectiveness, and measuring the impact of partnership activities on the achievement of the overall goal. The reports are to enhance efficiency, effectiveness, and sustainability of the UNEP Global Mercury Partnership.

This document is a draft report on overall progress of the UNEP Global Mercury Partnership. It has been developed by UNEP and reflects input received from within the partnership areas. It considers the future direction of the Partnership in the context of the mercury Intergovernmental Negotiating Committee process. The first two reports on progress were prepared for the periods of January 2009 – June 2010, and June 2010 – July 2012, and are available on UNEP's web site.

Section I: Assessment of overall Progress

In paragraph 20 of UNEP Governing Council Decision 25/5, the Executive Director of UNEP and members of the UNEP Global Mercury Partnership were commended for the progress in developing and implementing the Partnership as a vehicle for immediate action on mercury. During the negotiations of the Minamata Convention on Mercury, many governments emphasized the key role of the Partnership in supporting the work of the Intergovernmental Negotiating Committee (INC), and stressed the importance of continued support of the Partnership in implementing the Convention. Article 14 of the Convention mentions partnerships as one means of delivering the capacity building, technical assistance and technology transfer needed by Parties to implement the Convention. Furthermore, the Final Act of the Conference of Plenipotentiaries on the Minamata Convention on Mercury welcomed the actions taken through the UNEP Global Mercury Partnership and urged all partners to continue their efforts and to support, participate in and contribute to the Partnership. Overall interest in the UNEP Global Mercury Partnership continues to be strong. Partners agree that the partnership areas are a good venue to share and exchange relevant information.

Partner Membership

The number of official partners is steadily growing:

- As of 1 July 2010, there were 70 official partners in the Global Mercury Partnership. In June 2013 the number increased to 118 and on September 2014, there were 131 official partners in the Global Mercury Partnership, including 26 governments, 5 intergovernmental organizations, 54 non-government organizations, and 46 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.

Endeavouring to secure adequate funds

- In the past, Governments of the United States of America, Japan, Sweden, Switzerland, Norway, Spain and the European Commission among others have provided funds for the work of Partnership.
- UNEP currently supports the work of the Partnership with two P4 and one P3 professional staff with funding from the UNEP Environment Fund as well as from extra budgetary resources.
- UNEP has also taken other steps to secure funding, such as through raising limited funds through the Strategic Approach's Quick Start Programme (in particular for activities relating to artisanal and small-scale gold mining), through the UNEP-USEPA cooperative agreement, UNEP-US Department of State cooperative agreements and through Norway ODA funds. Although the partnership donor base has expanded, overall funding levels have decreased.
- A common weakness identified in the partnership area evaluations includes the lack of funding for partnership area activities. Additional funding is required to implement activities under the UNEP Global Mercury Partnership in line with priority actions established in the partnership area business plans. Taking this into consideration, business plans may be revised to include fundraising as a priority.
- Overall, funding for specific projects is often easier to secure compared to funding for the running of the secretariat.

Leadership and scope of the partnership areas

Business plans have been updated for the following seven partnership areas: artisanal and small-scale gold mining; mercury cell chlor-alkali production; mercury air transport and fate research; mercury in products; mercury releases from coal combustion; mercury waste management; and mercury supply and storage. A new partnership area business plan has been developed for mercury releases from cement industry. The business plans provide clarity and accountability for partnership area efforts and timelines. The current business plans are available on the UNEP Mercury Programme website.

Artisanal and Small-Scale Mining

The United Nations Industrial Development Organization (UNIDO) and the Natural Resources Defense Council (NRDC) are acting as co-leads 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.

Mercury in Chlor-Alkali Production

The United States of America Environment Protection Agency is acting as lead of the mercury cell chlor-alkali production 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. The partnership promotes a target of reduction in mercury demand to 250 tons by 2015.

Mercury Fate and Transport

The National Research Council Institute for Atmospheric Pollution Research, Italy is acting as lead of the mercury air transport and fate research partnership area. The objective of this partnership area 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, by enhancing information sharing among scientists and between them and policymakers and by providing technical assistance and training. Considering the importance of an integrated evaluation of mercury impacts on the whole environment, the scope of the Partnership's research activities has been recently extended to include aquatic transport and fate of methylmercury to biota as well as human exposure.

Mercury in Products

The United States of America Environment Protection Agency is acting as lead of the mercury-containing products 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 procedures.

Mercury from Coal Combustion

The International Energy Agency (IEA) Clean Coal Centre is acting as lead of the mercury releases from coal combustion partnership area. The objective of this partnership area is the continued minimization and elimination of mercury releases from coal combustion where possible.

Mercury Waste Management

The Government of Japan is acting as lead in the mercury waste management partnership area, which was initiated in early 2008 by the Government of Japan. 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.

Mercury Supply and Storage

The Governments of Spain and Uruguay took over as co-leads for the mercury supply and storage partnership area in November 2011 from the Mercury Policy Project. The objective of this partnership area is to encourage environmentally sound storage of mercury, discourage the production of primary mined mercury, and better understand global sources and flows of mercury

Mercury in Cement Production

The cement partnership area is led by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). It is the newest partnership area, having been proposed in 2011. The objective of this partnership area is to minimize mercury releases to the environment from cement manufacture. The business plan of the Partnership is being worked upon.

Assessing effectiveness of the partnership areas

The partnership areas have identified objectives that are meant to reflect desired outcomes of the partnership area. The objectives are outlined above in the section that outlines the leadership and scope of partnership areas. The partnership areas' business plans outline indicators of progress, which are intended to assist in tracking progress in partnership area reporting to UNEP.

Section II: Encouraging partnership areas in moving forward

As specified in the UNEP Global Mercury Partnership Overarching Framework, the partnership areas should support the overall goal of the Partnership through contributing to the following objectives:

- Minimization and, where possible, elimination of mercury supply considering a hierarchy of sources, and the retirement of mercury from the market to environmentally sound management;
- Minimization and, where feasible, elimination of unintentional mercury releases to air, water, and land from anthropogenic sources;
- Continued minimization and elimination of global use and demand for mercury;
- Promoting the development of non-mercury technologies where suitable economically feasible alternatives do not exist.

In addition, the work of the UNEP Global Mercury Partnership must be consistent with UNEP Governing Council Decision 25/5.

Overall, the Partnership Advisory Group notes the efforts of the partnership areas to respond to the recommendations that are made at the various Advisory Group meetings. The Partnership Advisory Group recommends continued efforts to maximize efficiency and promote cooperation and coordination within the overall Partnership and suggests partnership areas continue to link together with activities of other partnership areas, including by hosting joint meetings and improving communication. The Advisory Group also suggests sharing responsibility and leadership and to more actively build upon the successes of the Partnership. Better communication is also recognized as being pivotal to attract funding and new partners.

Meeting the overall objective of the partnership

Below, the Partnership Advisory Group reviews the objectives, targets and timelines established in each of the partnership area business plans with the aim of encouraging the work of the partnership areas consistent with the overall goal and operational guidelines of the Partnership.

For the artisanal and small-scale gold mining partnership area:

The partnership area has contributed to meeting its objectives through activities oriented around its three priority areas: 1) Support governments in setting national objectives/ targets, 2) Support governments in setting national objectives/ targets, and 3Exploring innovative market-based approaches. To orient their work around the Minamata Convention on Mercury, the partnership area is also focusing efforts on assisting countries develop national action plans as required by the Convention. To this end, they partnership area has developed draft guidance for countries on national action plans that will be introduced at INC6.

The ASGM partnership area has engaged in numerous projects in many regions of the world during the reporting period. A full description of these projects can be found in the annual partnership activity reports, but selected projects include:

- Ban Toxics together with the Danish NGO, Dialogos, the Department of International Health, Immunology and Microbiology (ISIM) of the University of Copenhagen (Faculty of Health Sciences), International Committee of Environmental, Occupational and Public Health (Danish Society of Environmental and Occupational Medicine), Geological Survey of Denmark and Greenland, and the Benguet Federation of Small-Scale Gold Miners, Inc. have embarked on a multi-year, multi-pronged project to introduce mercury-free techniques utilizing miner-to-miner and rural health worker trainings.
- The US State Department has ongoing demonstration project in Francophone West Africa to develop and implement an intervention model that self-replicates, to reduce and eventually eliminate mercury use in small scale gold mining operations, while improving health, environment and wealth of ASGM communities.
- UNEP, with funding from US EPA and in collaboration with its project partner (Blacksmith Institute) has been implementing a training and technology transfer project on reducing mercury use in ASGM in Indonesia.
- Through a US State Department grant, the Environmental Law Institute is working in Nigeria with various stakeholders to assess the ASGM sector and develop legal and policy recommendations to assist the Nigerian government to address mercury and lead poisoning issues associated with ASGM.
- USEPA has provided funding to revise the guidance document for National Action Plan formulation. A drafting meeting was organized by NRDC in Washington DC in August 2014 with the participation of the following partners: AGC, Ban Toxic, Biodiversity Research Institute, UNIDO, US State Department and USEPA. A draft has been circulated for comments.
- NRDC, co-leader of the Partnership, launched the DC Roundtable on ASGM. The group includes more than 50 individuals from all of the major U.S. government and international donor agencies located in Washington, DC that work on ASGM (U.S. State Department, U.S. EPA, USGS, U.S. Department of Labor, USAID, the World Bank, IADB, and various academics and NGOs). The Roundtable has created a space for discussion among organizations to find ways to work together to accelerate progress and to prioritize ASGM on the funding agendas. The group has held quarterly meetings, promoted informal collaborations, created information platforms for ASGM (including a project library and a wiki site), and held special sessions of the Roundtable when ASGM specialists visit DC.
- A GEF project, developed in Ecuador and Peru, aims to demonstrate and replicate mercury emission reduction methods and non-mercury gold extraction for the artisanal and small-scale gold mining sectors of located in the Puyango-Tumbes river basin region.
- PLAGBOL (Bolivia) together with Blacksmith Institute, the Danish NGO, Dialogos, Geological Survey of Denmark and Greenland, the Danish NGO ICOEPH and the Federation of Small-Scale Miners, in La Paz Bolivia, embarked on a one year pilot project to introduce mercury-free techniques utilizing miner-to-miner trainings, training of health care workers and awareness raising in mining societies in Bolivia. The project is financed by Empleomin (an EU funded entity in Bolivia) and the Danish Embassy. The project is bringing miners from the Philippines to reach out to Bolivians miners to train them on the adoption of mercury-free techniques. The project is focusing on indigenous expertise that improve upon gravitational methods (e.g. use of sluice box and panning) and the use of direct smelting at the refining stage of the process, as demonstrated in the Philippines project mentioned above. The project has started a mapping of problematic mercury polluted areas and later this

year trials with the mercury free method is taking place alongside the trainings and awareness-raising.

- The US Agency for International Development is working to support the efforts of Colombia´s national, regional and local authorities and local miners' organizations in promoting economic and social development in the certain gold mining regions
- EEB funded a project entitled Mercury Measuring in Educational, Health, Dentistry and Artisanal and Small Scale Mining in Tanzania, carried out by AGENDA, a Tanzanian NGO. Priority Area 3: Exploring innovative market-based approaches
- An UNIDO led project, funded by FFEM (Fonds Français pour l'Environnement Mondial) and GEF is underway in Francophone West Africa (Burkina Faso, Mali and Senegal). Implemented by Alliance for Responsible Mining (ARM) and AGC, the project focuses on transferring technologies that eliminate mercury emissions from the sector and introducing the Fairmined standard at selected sites in the three countries.
- A regional project was implemented by ARM and its local partners Red Social, Cumbre del Sajama and ASOMIRCOL in the Andean countries of Latin America (Bolivia, Colombia, Peru). It is funded by Inter-American Development Bank, Fondo Acción Ambiental and Tiffany Foundation and works with over 20 ASM organizations to implement Fairmined Standard best practice, including reduction of mercury.

For the mercury cell chlor-alkali production partnership area:

The partnership area will continue its information sharing efforts in the areas of technical cooperation for mercury use and release reduction and on conversions. Looking forward, the partnership area will focus on three main areas (specific activities will depend on individual partners and available resources). First, we will continue efforts to encourage and facilitate conversions of mercury-cell facilities. Partners have previously discussed assisting governments and facilities with accessing financing for conversions through multilateral development banks and similar institutions. Next, we will attempt to assist in ensuring environmentally sound decommissioning of facilities and sound waste management practices. This could include disseminating guidance from a variety of sources, including the Basel Convention, UNEP Mercury Sourcebook, private firms offering waste management services, and environment ministries. Finally, the partnership area is aware of the significant challenge of dealing with large amounts of mercury from decommissioned plants in accordance with the provisions of the Minamata Convention. We will work together with the Supply and Storage partnership area to attempt to provide assistance in this critical area.

The Partnership's updated inventory shows that global mercury-cell chlorine capacity decreased from 9000 Kt Cl in 2005 to about 5100 Kt Cl in 2013. The number of chlor-alkali facilities also decreased from about 140 in 2005 to 81 in 2013, and conversions and closures continue at a sustained pace. Euro Chlor has committed to closing all their mercury-cell facilities, which represent almost all mercury-cell production in Europe, by 2020. The Minamata Convention includes a requirement for parties to not allow mercury-cell chlor-alkali production by 2025 (although exemptions beyond this date are possible).

The World Chlorine Council (WCC), which includes more than 80% of the global mercury-cell chlorine capacity, reports average mercury releases (to air, water, and products) per unit of chlorine produced. For the period of 2012-2013, WCC reported mercury releases of about 1.3 grams Hg per tonne Cl2. Mercury releases per unit chlorine production have stayed relatively constant since 2007. See: http://www.unep.org/chemicalsandwaste/Portals/9/Mercury/WCC%20Hg%20reporting%20in%202014.xls

For the mercury air transport and fate research partnership area:

- The overall objectives of the partnership are planned to be met by the following activities:
- Contribution to the development of the the UNEP Global Mercury Assessment 2013, including being responsible for the development of specific sections in the Technical Background Report to this assessment.
- Establish of the global monitoring system for mercury with 28 land based monitoring sites (see GMOS website – www.gmos.eu);
- Completion of oceanographic and aircraft measurement campaigns;
- Planning and implementation of a centralized repository archive and established advanced web services;
- Establishment of a database of historical, current and future scenario mercury emissions.
- Results from the activities have been made available on GMOS website (www.gmos.eu) and the F&T web portal for scientists, policy makers and stakeholders.
- Improvement, validation and intercomparison of regional and global scale atmospheric mercury models (the latter with external partners within the GMOS Mercury Modelling Task Force (MMTF);
- Model application to evaluate source-receptor relationships, temporal trends and future emission scenarios;
- Preparation of a white paper, still in progress, aiming to provide a framework for using GMOS as a model for global monitoring of mercury under Minamata Convention on mercury, that will be supplied to all partners by the end of 2014;
- Attended various scientific meetings to present results.

For the mercury-containing products partnership area:

The partnership aims to meet the overall objectives by continuing on with cooperative agreements to help build capacity and best management practices for mercury waste collected from health care products and other sectors addressing mercury in products.

Partners have indicated increasingly limited resources, and therefore efforts to develop future projects are pending interest of partners and availability of resources.

Projects completed during the reporting period include:

- The Basel Mercury Waste Capacity Building from Products Partnerships cooperative agreement, which helped build capacity and best management practices for managing discarded mercury products collected from health care facilities and other sectors. Key outcomes included conducting Conducted workshops on developing national plans for managing mercury waste in Argentina, Costa Rica, and Uruguay.
- The Health Care Cooperative Agreement to Provide Technical Support for Mercury Reduction in Hospitals, a four-year initiative to expand existing and launch new health care mercury inventory, reduction, waste management, and training pilots. Key outcomes included expansion of reduction projects in Latin America (Brazil, Costa Rica, Ecuador, Mexico).
- Completed the Phasing Down Dental Amalgam country case studies, an effort to conduct case studies where countries have "phased down" the use of dental amalgam, including the prevalent trends, variations and commonalities. Key outcomes included describing prevalent trends, variations and commonalities among countries achieving reductions in the use of dental amalgam.

- Worked with UNEP to create the "Alternatives to Mercury-Containing Products" brochure.

For the mercury releases from coal combustion partnership area:

The activities for the partnership area during the reporting period have focused on the development of guidance material, emissions factors, inventories and demonstration projects.

Several key milestones have been reached. A study on coal used and emissions from the Indian power sector has been completed. Two demonstration projects in Russia (using sorbent injection and oxidation techniques) have been completed.

In addition, A project characterizing coals used in South Africa with the purpose of optimizing pre-treatment of coal has been initiated. This is joint project between the UNEP, US Geological Service and Eskom (the main power generator in Spout Africa). The partnership area has presented its work at several international meetings strengthening communication and outreach of the partnership. Several papers have been published in international journals. The partnership will play a significant role in the upcoming International Conference on Mercury as a Global Pollutant (ICMGP 2013) in Edinburgh with a session on coal emission and 2 sessions on control technologies.

The POG and iPOG, (process optimization guidance materials for the coal sector for mercury reduction) produced under the previous reporting period, have been disseminated widely at meetings and workshops. The Coal Partnership has liaised with the British Standards Institute in order to establish a new CEN/ISO (European Standards Committee and International Standards Committee) working group on mercury measurement using sorbent traps.

Finally, A new discussion document, currently in draft, has been prepared highlighting synergies and similarities between the UNFCCC and Minamata for the coal sector which a view to highlighting potential benefits from projects which consider both conventions simultaneously.

For the mercury waste management partnership area:

The partnership area is focusing on assisting with development and revision of the Basel Convention Technical Guidelines to promote environmentally sound collection, disposal and treatment techniques for mercury waste following a lifecycle management approach.

The list of resource persons who could give advice from technical standpoint on activities of the Waste Management Partnership Area and those for reducing mercury releases from waste management is being revised and will be shared upon completion.

The partnership area initiated a project on a fluorescent lamp compaction plant & final disposition of mercury containing waste (dilution and solidification) controlled area. This project aims to construct the first fluorescent lamps compaction plant in Panama region, and prepare for the final disposition of mercury containing waste. 1.5 million lamps are planned to be processed by 2020.

For the mercury supply and storage partnership area:

The partnership areas encourage linkages with the chlor-alkali partnership and requested its assistance in gathering data on estimated quantities of surplus mercury worldwide projected to be available in the near future. The chlor-alkali partnership area has produced such an

estimate (the global chlor-alkali inventory), and the supply and storage partnership area is now considering what actions to take.

The Kyrgyz Republic mercury mining project was expanded in 2012 with the addition of significant funds from the Government and Norway and the GEF. However, despite a promising start, the project has been stalled due to political factors in the Kyrgyz Republic. The partnership area hopes that work in on this crucial project can resume as quickly as possible. The project focuses on reduction of most immediate threats posed by the mine site to the environment and people, promotion of investment in other economic development activities and local alternative employment in the region.

In other work, The Ministry of Agriculture, Food and Environment of the Government of Spain prepared and published the document entitled "Buscando soluciones para la gestión medioambiental responsable del mercurio" to offer solutions for the safe management of mercury.

In addition, UNEP concluded the implementation of a national storage and disposal project in Mexico and Panama in August 2013. Supported by the Government of Norway, the project provided an assessment of relevant national legislation and regulatory frameworks and an inventory of hazardous waste treatment facilities that could serve as temporary mercury storage facilities. The project resulted in national action plans aimed at the environmentally sound storage and disposal of mercury in both countries.

Under the Mediterranean Action Plan (UNEP/MAP) of the Barcelona Convention there was a decision to prepare the document "Guidelines on BEPs for the environmentally sound management of Mercury contaminated sites". The decision was taken in the context of the "Regional Plan on the reduction of inputs of Mercury in the framework of the implementation of Article 15 of the LBS Protocol".

For the mercury from cement partnership area:

The Cement Partnership is still in its early phase. aims to supplement existing programs in key, strategically selected ways to ensure that reductions are globally significant.

- Specifically, control technologies that the Partnership wishes to investigate include:
- Wet Scrubbers: investigate under what conditions in a multi-pollutant abatement scheme control technology for SO2 could be economically applied to mercury.
- Absorption Technologies: determine types of sorbents and cost effectiveness of absorption technologies.
- Dust Shuttling: determine the effectiveness of removing mercury from a cement kiln system by using dust shuttling1 over a wide range of process conditions.
- Continuous Emission Monitoring (CEMs): As of 2012, there are a few CEMs for mercury monitoring installed in the cement industry. Past history in terms of reliability, up time and accuracy, as well as their relatively high cost, have slowed the implementation of this technology's adoption. In the last few years though, there have been significant gains made in this technology that deserve further attention.

Next steps

To be developed by the PAG

At PAG5, the Partnership Advisory Group made the following overall observations and recommendations that PAG6 may wish to reflect upon in completing this section:

1. There is a need to better communicate progress of the Partnership and further recruit key stakeholders, especially Government partnership, to expand the sphere of influence of the partnership areas. In addition, the Partnership must do a better job communicating its potential to assist with Minamata implementation to the INC and individual stakeholders.
2. The Partnership has a very important role in helping countries ratify and implement the Minamata Convention. The Partnership as a whole, and each partnership area individually, should reflect on the best ways they can contribute to Minamata implementation.
3. Partnership areas should look for ways to work together and find synergies to increase the overall effectiveness of the Partnership. One example that was given was the potential for collaboration between the chlor-alkali partnership area and the supply and storage partnership area on the problem of excess mercury for closed chlor-alkali plants.
4. The Partnership plays a very important role in information dissemination. The web site is a key tool, but it could be better utilized to increase the ease of which interested parties can find the needed information. Individual partnership areas should consider how they want information organized on the web site and work with the UNEP secretariat to make changes.
5. Mostly, the business plans were described as on track. However, this may be the time to revisit some language in the business plans to make modifications, for example some of the priority actions may have shifted now that the Minamata Convention has been finalized.