



**Global Mercury Partnership  
Partnership Advisory Group  
Fifth meeting**  
Edinburgh, 27 July 2013

## **Report on activities (June 2012- July 2013) and future plans of the UNEP Global Mercury Partnership**

### **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 report since the fourth meeting of the Partnership Advisory Group.

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

## **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.
2. Under the Global Mercury Partnership, eight partnership areas have been established, including: artisanal and small-scale gold mining, mercury cell chlor-alkali production, fate and transport, mercury in products, coal combustion, mercury waste management, mercury supply and storage, and mercury releases from cement industry.
3. This report provides a list of the highlights of partnership area activities over the period of June 2012 to July 2013, per partnership area. The partnership area business plans provide a full list of current partnership area work. Business plans are available on the UNEP Global Mercury Partnership website as PAG 5 INF 2.

## **Global Mercury Partnership Participation**

4. The number of official partners is steadily growing:
  - As of 30 June 2012, there were 111 official partners in the Global Mercury Partnership, including 24 governments, 5 intergovernmental organizations, 44 non-government organizations, and 38 others.
  - As of 30 June 2013, there were 118 official partners in the Global Mercury Partnership, including 25 governments, 5 intergovernmental organizations, 48 non-government organizations, and 40 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.

## Reducing mercury use in Artisanal and Small-Scale Gold Mining

5. The United Nations Industrial Development Organization (UNIDO) and the Natural Resources Defense Council (NRDC) are jointly leading the artisanal and small-scale gold mining partnership area.
6. The objective of this partnership area is to reduce and eliminate 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, as an inspirational goal.
7. Key activities in this area include:
  - i. Through UNIDO, SAICM, has provided funding to Mali and Cote d'Ivoire to establish an inventory of the extent of the sector in the countries as well as finalizing their National Action Plan. The Artisanal Gold Council (AGC) has commenced work in the Ivory Coast by carrying out two-day training sessions with government officials, academics, civil society, and ASGM representatives. A key component of this training was the elaboration of ASGM inventory methodologies.
  - ii. 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 project focuses on indigenous expertise and excellent progress has been made in convincing and motivating miners to move away from mercury, particularly in indigenous communities. At least 1,100 miners have been trained in the project area. Currently the project is beginning to monitor the amount of mercury reduction induced by the project and create local structures that will sustain the achievements long after the project's end.
  - iii. 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. Self-replication requires incentives and education. Measures of success for the intervention model will include: improvement of economic opportunities for miners and their communities, increased knowledge of health safety, and environment, and a measured reduction in mercury use. In Francophone West Africa, AGC has been able to: develop detailed inventories of 36 different ASGM sites in Burkina Faso; strengthen the Burkina Faso ASGM national estimates and supply chain mapping as a result of the collection of additional information; comprehensive ASGM inventory training of our Burkina Faso representative; select the Burkina Faso mercury-free processing plants and develop the technical and feasibility of logistical requirements for ordering, importing, assembling, and maintaining them.
  - iv. The US State Department funded a project on reducing mercury use and release in Andean Artisanal and Small Scale Gold Mining. This project includes: (1) evaluating mercury levels in the air in Piura mining operations. (2) Educating and training miners in Suyo, Servilleta, Morocho and San Sebastian to make and use individual glass bowl mercury retorts. (3) Apportionment of Hg pollution and mobility from small-scale gold mining tailings and processing plants in Ecuador and Peru's shared water resource of the Puyango-Tumbes River. (4) Arrange meetings to establish the International Training Center of Artisanal Miners (ITCAM). A Business Plan to establish list and feasibility study for small processing plants for

the Piura Department. These results were presented to the Government of Piura in February 2012.

- v. Since 2011, now extended to 2014, the US State Department has funded a sub-regional mercury storage project in the Philippines and Indonesia. This project brought stakeholders together to develop a national approach to the environmentally sound management of mercury, with focus on the storage of mercury from the ASGM sector. The project will also include nationwide mercury monitoring in ASGM hotspots, development of technical and non-technical methodologies to identify mercury use, and understanding gender roles in small-scale mining and contribution of women to mercury-free transition in the sector.
- vi. 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. The project primarily focuses on technical interventions to significantly reduce mercury emission from ASGM. Since the inception of the project, ninety retorts, ten sluices (to ore processors) and fifty water-box condenser systems have been distributed, helping in reducing mercury use in specific regions of the country. The project is also working on promoting health awareness, training of miners and outreach through media. During the project, a National multi-stakeholder workshop was held to promote the development of a national strategic plan. A second national workshop was held in the last quarter of 2012. As a result of the national action planning workshops, the Government of Indonesia is moving ahead with producing their first national action plan for addressing mercury use in ASGM. US EPA has offered to provide guidance to the Government of Indonesia as they undertake this effort.
- vii. A Global Environment Facility (GEF) project is underway for Francophone West Africa (Burkina Faso, Mali and Senegal). By transferring technologies that eliminate mercury emissions from the sector and introducing the Fairtrade/Fairmined standard in a selected number of sites in the three countries. This project has produced data collection; initiation of the elaboration of the National Action Plan; distribution, and where feasible, demonstration of the Technical Guidance document in the field. A mercury-free processing plant is planned for a pilot community in Senegal by the end of 2013.

### **Future plans of the partnership**

- i. The Partnership is assisting UNEP in planning and organizing the second Global Forum to reduce mercury use in ASGM. As of now, the forum is going to be held on the 3-5 of September 2013 in Lima, Peru.
- ii. The Philippines recently received funding from the Global Environment Facility (GEF). This GEF project focuses on strengthening local and national capacity to effectively reduce mercury use, emissions and exposure in Artisanal and Small Scale Gold Mining (ASGM) communities in the Philippines through demonstration and replication of mercury reduction and elimination projects. Local and national stakeholders will receive health, techniques, and technology trainings, and promote policy reforms based on the lessons learned.
- iii. 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. The project is implemented by UNIDO with strong involvement of other partners, including INIGEMM, the national counterpart in Ecuador; ALA, the local water authority in Tumbes, Peru; and the University of British Colombia.

## **Mercury reduction in Chlor-Alkali sector**

8. The United States of America Environmental Protection Agency is lead in this partnership area.

9. 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.

Specifically, it aims to

- i. Prevent the construction of new mercury-cell chlor-alkali production facilities
- ii. Reduce mercury emissions and use from existing mercury-cell facilities
- iii. Encourage conversion to non-mercury processes
- iv. Reduce or eliminate mercury releases from waste generated by
  - v. chlor-alkali production facilities including waste from conversion to non-mercury process
  - vi. mercury process
- vii. Promote environmentally sound options for storage of surplus mercury to limit downstream releases from surplus mercury generated by the conversion, phase-out, or closure of mercury-cell chlor-alkali facilities

10. The partnership promotes a reduction in demand to 250 tonnes by 2015. This target presents a 50% reduction in mercury demand by 2015 based on a 2005 baseline of 500 tonnes. The World Chlorine Council, which includes more than 80% of the global mercury-cell chlorine capacity, reported 160 tons of mercury use in 2012. Based on this, it is likely that global demand is already below 250 tonnes per year.

11. Key activities in this area include:

- i. The Partnership is working to update the comprehensive inventory of mercury-cell chlor-alkali facilities throughout the world. This inventory helps identify countries and organizations that could benefit from technical exchanges. The Partnership is currently updating the inventory and expanding the type of data that will be presented. Information and data to be obtained in the global inventory was agreed by the Partners during the annual Partnership call that took place 10 July 2013. The Partnership plans to continue its inventory and data gathering and make available the information to the Waste Management and Supply and Storage Partnership areas for recommendations on the environmentally sound management of excess mercury.
- ii. The Partnership has completed the final version of the paper on the economics of conversion of mercury-cell chlor-alkali facilities to non-mercury technology. The partnership plans to disseminate the information which may be useful in the transitioning to mercury free chlor alkali plants.
- iii. The Partnership is currently investigating the production of a video on the safe handling of mercury, including during decommissioning

## **Future plans of the partnership**

- i. The partners believe that advances are being made but that challenges remain with regards to conversion and storage. The path forward depends greatly on the establishment of technical and regulatory capacity within the affected countries and regions for surplus mercury management, and on financial capacities within the specific industries. The UNEP effort on storage should be of enormous help in this regard over the longer term. Partners have also expressed interest in seeking financing from international development banks for conversions. The Partnership is considering how it can adjust its role to address these needs. The Chlor alkali Partnership Area will also pursue close collaboration with the Storage and Supply Partnership Area, and with the Waste Partnership Area.

- ii. The Partnership plans to: a) consider using existing materials or generating new materials to provide guidance to governments on identifying potentially contaminated sites at closed or converted chlor-alkali facilities. The guidance may also address site assessment and remediation; b) create a video to highlight best practices for mercury management and decommissioning; c) continue to improve and update the global inventory and d) continue information sharing, particularly on decommissioning, waste management, and remediation.
- iii. The Ministry of Environment of Tunisia approached UNIDO in 2012 for assistance to improve their mercury management, especially at a former chlor alkali plant located in Kasserine, a hotspot for mercury contamination, approximately 300 km southwest of Tunis. There is currently very limited information on the presence, sources, and quantity of mercury used and emitted in Tunisia from all sectors, therefore, the project intends to include the following components: 1) develop national guidelines for the management of mercury containing waste, including a national inventory of mercury sources and estimated emissions; 2) conduct a complementary assessment of previous investigations at the former chlor alkali plant site; 3) draft a remediation plan ready for submission to the donors. The proposed budget to the Partnership is currently on investigating the production of a video on the safe handling of mercury, including during decommissioning.

## **Mercury Air Transport and Fate Research**

- 12. The CNR- Institute of Atmospheric Pollution Research, Italy is leading this partnership area.
- 13. The objective of the partnership area (F& T) 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. The F&T is primarily engaged in the development of sound scientific information; enhancing sharing of such information among scientists and policymakers; providing technical assistance and training; enhancing the development of a globally-coordinated mercury observation system to monitor the concentrations of mercury species in air and water ecosystems.
- 15. Key activities in this area include:
  - i. Contributed to develop the UNEP “Global Mercury Assessment 2013; Sources, Emissions, Releases and Environmental Transport”, including being responsible for the development of specific sections in the Technical Background Report to this assessment. The UNEP report was requested by the UNEP Governing Council (GC) in 2009, and it was presented to the GC in 2013.
  - ii. In the framework of project Global Mercury Observation System (GMOS), the following activities were conducted in 2012-2013:
    - 1. Revision of Standard Operating Procedures (SOPs) on measurement of mercury in precipitations and on Total Gaseous Mercury/ Gaseous Elemental Mercury (TGM/GEM ) and mercury speciation;
    - 2. Development of Quality Assurance/ Quality Control (QA/QC) on-line procedures and ad-hoc software;
    - 3. Development of a on-line logbook, a logging system for data measurements;
    - 4. Development of a Cyber(e)-Infrastructure that allows experts to archive, catalogue and exchange data on mercury and its compounds in ambient air and precipitation, as well

- as in the marine and terrestrial ecosystems, and which also provides advanced web services and processes.
5. First aircraft ETMEP (“European Tropospheric Mercury Experiment Program”) measurements performed on Mount Etna, Sicily (Southern Italy) in July/August 2012 to improve our knowledge on the vertical distribution of tropospheric mercury as well as to understand the regional transport and the potential range plumes and relative importance of emissions (volcanic emissions and biomass burning).
  6. The next aircraft measurements plan for the second part of ETMEP flights is foreseen in summer (August) 2013.
- iii. Results from the activities have been made available on GMOS website ([www.gmos.eu](http://www.gmos.eu)) and the F&T web portal for scientists, policy makers and stakeholders (link to be provided).
- iv. Meetings: During the period January 2012 - July 2013 the F&T members have met several times. Below are the most relevant meetings to which F&T has contributed or that will take place in the near future with relevant F&T involvement:
1. 16th International Conference on Heavy Metals in the Environment (ICHMET 2012), 23rd-27th September 2012 Rome, Italy. Organized by the National Research Council of Italy (CNR) Institute of Atmospheric Pollution Research (IIA). In the same occasion the F&T has organized a special session “The UNEP Global Mercury Partnership” co-chaired by UNEP, The chair of Partnership Advisory Group and the Chair of the Intergovernmental negotiating committee (INC) with the aim to promote science-policy interactions and to enhance international exchange of information through presentations from scientists, government officials, NGOs and other stakeholders.
  2. GEO Work Plan Symposium 2013 4th – 6th June 2013, Geneva, Switzerland.
  3. Demonstrating GEOSS Added Value: Sprint to Summit. The 2013 Work Plan Symposium was focused on accelerating GEOSS implementation and demonstrating GEOSS added-value through the Sprint to Summit initiative of the GEO Implementation Boards. The task HE-02 Tracking Pollutant was presented to demonstrate Societal Benefits of activity developed within the Components "Global Mercury Observation System" and "Global Monitoring of Persistent Organic Pollutants, Emerging Contaminants and Global Change Indicators". [ftp://ftp.earthobservations.org/201306\\_Work\\_Plan\\_Symposium/](http://ftp.earthobservations.org/201306_Work_Plan_Symposium/)
  4. “Revision of GMOS SOPS, QA/QC Procedure & Ad-hoc Software and Data Policy”. 10-12 June 2013, Rome, Italy.
  5. INSPIRE Conference 2013. 23rd - 27th June 2013 Florence, Italy. The aim of the Conference is to take stock of the progress of INSPIRE spreading over Europe and beyond, with on the way, its principles being debated and implemented. Info at: [http://inspire.jrc.ec.europa.eu/events/conferences/inspire\\_2013/#callfp](http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2013/#callfp)
  6. ICMGP - International Conference on Mercury as a Global Pollutant 2013 28th July - 2nd August 2013 Edinburgh, UK. Special session that will focus on the development of a Global Mercury Observation System toward the preparation of the global mercury treaty (GMOS). <http://www.mercury2013.com/conference-topic-overview/>

## **Future plans of the partnership**

Areas identified within the F&T Partnership for further investigation include:

- i. To develop a global observing system to monitor and model mercury contamination at regional and global scale. This could be done using GMOS as a framework, to support the implementation of future legally binding instrument aiming to reduce the impact of mercury emissions on human health and ecosystems that are under preparation (INC process) in the framework of the UNEP Mercury Program and last GC meeting's decisions.
- ii. Close coordination with the Group on Earth Observations (GEO), the organization working to build GEOSS (the Global Earth Observation System of Systems), to include mercury in GEOSS work plans;

- iii. Further involvement of the F&T partners in several International Conference such as the 11th International Conference on Mercury as a Global Pollutant to be held in Edinburgh, UK in 2013;
- iv. Further coordination and liaison with various organizations and programs (such as United Nations Economic Commission for Europe, Arctic Monitoring and Assessment Programme, UNEP Regional Seas);
- v. Develop a global biotic Hg database that will provide a baseline of mercury levels from which to evaluate Mercury Treaty effectiveness. Place particular emphasis on marine coastal and open ocean fish and other food items is important to monitor for human health purposes;
- vi. Explore opportunities to integrate current or proposed Hg monitoring programs for biota in the western hemisphere that can be used for global monitoring purposes and linked with measurements of air deposition and watershed releases;
- vii. To expand the scope of F&T to include dispersed sources of mercury to the global mercury budget, such as re-emission of mercury from contaminated sites (including emissions to the atmosphere and water cycle)
- viii. To expand the scope of F&T by including ecosystems that are sensitive to the mercury load (indicators are still to be developed).
- ix. To liaise with supporting activities that are already provided through regional meteorological institutions. This link will enhance and strengthen the quality of measurement results and secure worldwide comparability (stronger collaboration with the WMO is suggested) and may assure a sustainability of efforts and coordination globally.
- x. To develop global protocols for monitoring of waters, sediments & biota in terrestrial, freshwater, and marine ecosystems that will assist in model development

## **Mercury –Containing Products**

- 16. The United States of America Environment Protection Agency is lead in this partnership area.
- 17. 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).
- 18. Key activities in this area include:
  - i. WHO-HCWH Global Initiative to Substitute Mercury-Based Medical Devices in Health Care. This global initiative led by WHO and Health Care Without Harm (HCWH) to achieve the sub-objective (above) related to fever thermometers and sphygmomanometers issued two-year progress report “Toward the Tipping Point” in July 2010; other information and materials are available at <http://www.mercuryfreehealthcare.org/> The Partnership plans to continue to support this initiative.
  - ii. Health Care Cooperative Agreement to Provide Technical Support for Mercury Reduction in Hospitals in Latin America. This is a four-year initiative to expand existing and launch new health care mercury inventories, promote reduction and waste management, and undertake training pilots. Activities led by the University of Massachusetts in Mexico and Ecuador include pilot projects to reduce mercury in hospitals. The cooperative agreement will end in July



2013. To date, the following reports are completed: (1) “Occupational Exposure to Elemental Mercury in Odontology/Dentistry” (English) – April 2012; and (2) “Elimination of Mercury in the Health Sector: a workbook to identify safer alternatives” (Spanish) – March 2013. Activities led by HCWH were completed in April 2013 and included efforts to conduct pilot projects to (1) reduce mercury in hospitals in Mexico, Brazil and Chile; and (2) conduct a Central American workshop (final report anticipated in August 2013).

- iii. UNEP- GEF “en.lighten project” includes promotion of lowering mercury content in lamps, advice on how to deal with broken lamps and the environmentally sound management of lamps waste. As of July 2013, 50 countries are members of the UNEP GEF en.lighten initiative’s global partnership on energy efficient lighting. In close cooperation with UNEP Chemicals and the GEF, en.lighten is currently designing the expansion of UNEP’s global support activities to promote the transition to efficient lighting into the commercial and outdoor lighting sectors, including the phase-out of Mercury Vapor Lamps and inefficient Linear Fluorescent Lamps, in alignment with the future Minamata Convention on Mercury. In addition en.lighten support activities will provide technical advice to countries for an accelerated adoption of Light Emitting Diodes (LED) and lighting control technologies. In cooperation with the Spanish collection and recycling organization Ambilamp, en.lighten has set up a training academy in Madrid to support developing and emerging country governments and the private sector for the establishment of legislation and effective schemes to take-back used lighting products and to run collection and recycling organizations.
- iv. UNEP- WHO “East Africa Dental Amalgam Dental Phase down Project aimed at demonstrating the phase down approach of dental amalgam in Kenya, Tanzania, and Uganda. Activities include dental amalgam trade and waste survey, clinical preventive dentistry and oral health promotion, promoting alternatives, and environmentally sound management of dental amalgam waste. The project is being implemented in the 3 countries in collaboration with the World Dental Federation and the International Association of Dental Manufacturers. Project results will be available in September 2013.
- v. The Partnership developed a brochure on the “Alternatives to Mercury-added Products” was launched during the exhibits at the 5th session Intergovernmental Negotiating Committee Informational in January 2013. The brochure was translated into Spanish and is found useful by countries in Latin America.
- vi. The Partnership had its annual meeting (conference call) 2 November 2012. In addition to general updates, the partners discussed PAG 4 goals to (1) improve communication and outreach tools/efforts inside and outside Partnership; and (2) develop portfolio of project proposals pending availability of funds/investors. Partners provided brief summaries of project proposals submitted in advance of the meeting; Partners then ranked proposals to create a priorities list for potential funders. On the basis of criteria set, 3 projects were submitted for potential funding by donors.
- vii. The following is the list of project proposals that was presented and discussed for consideration by the Partners:
  1. Reduction of demand for mercury in mercury containing products in Bangladesh
  2. The Sound Management of Mercury-Containing Products (Syrian Arab Republic)
  3. Reduction of the use of mercury products containing in Madagascar
  4. Study of mercury in leachate in Bizerte (Tunisia)
  5. Capacity Building For The Elimination Of Mercury In The Health Sector Of Ghana
  6. Developing Mercury Free Health Care Facilities In Nepal
  7. Education On Mercury Waste And Evaluation Of The Background In Children And Professionals (Medical Staff) (Tunisia)
  8. Adopting Mercury-Free Vaccine Assistance (Global)
  9. Reduce the impacts of mercury on human health and the environment by promoting sound chemical management (Vietnam)

10. Collection & take back programs to promote the proper disposal and final disposition of used CFL's light bulbs, Fluorescent lamps and other mercury containing lamps in Panama
11. Reduce the quantity of mercury used in lamps by proposing limits, providing guideline and policy tools for policy makers (Europe, Global)
12. Black Market Product Education Campaign (Global)
13. Testing Mercury levels in Ayurveda Medicines produce in Sri Lanka and India
14. Phase-out of Mercury Fever Thermometers and Blood Pressure Devices in Healthcare (Global)
15. "Living in a cleaner & less toxic city". Legislation, Communication, Collection & Neutralization Of Toxic Waste' Program (Panama)

### **Future plans of the partnership**

- i. The Partnership plans to continue providing a Forum for Partners and interested parties to exchange information, as well as to propose projects and identify potential funders/partners.
- ii. The Partnership also plans to act as the clearinghouse for materials generated by past projects (including reports on facilities audits, staff training, product alternatives/substitution, costs-benefits of transition to manufacturing mercury-free alternatives), as well as soliciting/posting materials from Partners and interested parties.
- iii. The partnership plans to continue providing technical support to the UNEP GEF en.lighten project in particular promoting lower mercury content in lamps, training on legislation and on take back and recycling for used lamps.
- iv. The Partnership plans to continue to support the WHO-HCWH Global Initiative to Substitute Mercury-Based Medical Devices in Health Care , as well as the project that provides Technical Support for Mercury Reduction in Hospitals in Latin America.
- v. The partnership plans to complete the Norway ODA funded project on the phase down of dental amalgam in East Africa, share results and explore funding for replication in other regions

### **Mercury control from Coal-Combustion**

19. The International Energy Agency (IEA) Clean Coal Centre is leading 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. The partnership area aims to supplement existing programs in key, strategically selected ways that ensure that reductions are globally significant as part of a multi-pollutant reduction approach. The partnership area aims to support such efforts while providing additional information on cost effective approaches for enhancing reductions of mercury emissions, particularly for developing nations and countries with economies in transition.
22. Key activities in this area include:

The activities for the partnership area have been focused on the development of guidance material, emissions factors, inventories and demonstration projects:

- i. A study on coal used and emissions from the Indian power sector has been completed. The report should be available soon.
- ii. Two demonstration projects in Russia (using sorbent injection and oxidation techniques) have been completed. Final reports should be finalized during the summer and will be posted on UNEP's and on IEA CCC's websites. Funding and technical support is provided by US Environment Protection Agency (US EPA), Swedish Environment Protection Agency and UNEP.

- iii. A project characterising 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). Final reports should be finalized in the beginning of next year.
- iv. 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.

### **Future plans of the partnership**

- i. A workshop on mercury measurements, focused on emissions measurements, is being planned in China. The workshop is not confirmed yet, but is planned to be conducted in October/November 2013.
- ii. Studies on coal used and emissions from the power sector have been proposed to Indonesia, Thailand, Vietnam and the Philippines. Indonesia was not able to conduct the project currently. Thailand, Vietnam and the Philippines have expressed their interest in such projects and we are in process of developing project proposals. Funds have been provided by USA and the EU.

### **Waste management partnership**

- 23. The Government of Japan is lead in this partnership area and collaborates closely with the Basel Convention secretariat.
- 24. 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.
- 25. Key activities in this area include:
  - i. A list of resource persons (27) is available to provide technical advice on activities of the Waste Management Partnership Area and on reducing mercury releases from waste management.
  - ii. “The Basel Convention Technical Guidelines on Environmentally Sound Management (ESM) of Wastes Consisting of Elemental Mercury and Wastes Containing and Contaminated with Mercury” seventh draft was prepared by the Small Intersessional Working Group that was led and funded by the Government of Japan. Guidelines were presented for consideration at the Basel Convention Conference of Parties 10 and consequently adopted in October 2011.
  - iii. The Basel Convention Capacity Building Programme in the Latin America and Caribbean Region to implement the Draft Basel Convention Technical Guidelines, is being carried out in Costa Rica, Uruguay, and Argentina. The project includes development of inventories of mercury containing wastes at the national level in the health sector and plans for the sound management of mercury wastes,; building of a temporary storage facility in at least one country (Costa Rica) and strengthening institutional capacity to manage wastes containing mercury in a sound manner. The project was completed in Costa Rica in June 2013 and resulted in a mercury management plan in the health sector, trained stakeholders on developing inventories of mercury emissions and ESM plans for mercury wastes.

## **Future plans of the partnership**

- i. At the Basel Convention COP 11 that took place in May 2013, Parties agreed to the update, revision, dissemination and implementation of the “The Basel Convention Technical Guidelines on Environmentally Sound Management (ESM) of Wastes Consisting of Elemental Mercury and Wastes Containing and Contaminated with Mercury”. The Partnership plans to support this work that will be led by the Government of Japan.
- ii. Complimenting the Basel technical guidelines on waste, a document entitled “Good Practices for Management of Mercury Releases from Waste” is currently being developed by the Partnership. The Partnership plans to finish the work and make available for use by governments and other stakeholders.
- iii. The Partnership plans to support UNEP Chemicals in the development of the “Practical sourcebook on mercury storage and disposal”. The sourcebook will provide practical examples, best practices, and decision trees which could be useful for governments in the environmentally sound storage and disposal of mercury waste.
- iv. The Partnership also plans to gather and consolidate information on available technologies required to secure the environmentally sound management of mercury waste, in collaboration with local authorities and the private sector.
- v. The Partnership plans to revise its business plan at the face-to face partnership meeting that will take place during the latter half of 2013 to reflect the discussion on mercury waste in the INC process.

## **Mercury Supply and Storage**

26. The Governments of Spain and Uruguay are co-leads 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:
  - i. The Kyrgyz Republic Primary Mercury Mine Project Partnership. This project supports the Kyrgyz Republic transition away from primary mercury mining to a more sustainable economic activity. The three year work plan of Phase 2 has begun in 2013 with the support of Global Environment Facility and the Government of Norway. Phase 2 aims to build up on the social, environmental and health assessment of the Khaidarkan mercury mine conducted in Phase 1, and develop a concrete remediation plan.
  - ii. The Governments of Spain, Brazil and Uruguay organized a workshop on mercury management in the Latin American and Caribbean Region, 21-22 May 2012. The workshop assessed the situation and existing challenges in the region, explored environmentally sound solutions, provided a forum for knowledge sharing and informed mercury management authorities; participants: representatives of all stakeholders. The workshop raised the following conclusions:
    1. It was recognized that the mercury waste management should be carried out at the place where it is generated to reduce exposure.
    2. Stabilization is one of the possible ways used for solving the management of metallic mercury, given the fact that, being liquid is the one that presents more difficulties, technical uncertainties and risks.

3. LAC representatives of the gold mining industry and of the chlor-alkali industry recognized that their sectors could, in principle, assume the costs to implement the mercury management measures.
- iii. Workshop on Hg management and decontamination in the Mediterranean Regional Plan on Hg (Almadén, Spain, December 2012), in the framework of the Mediterranean Action Plan, (Barcelona convention, UNEP). The workshop analyzed the situation and the main mercury problems in the region, provided technical support for ESM of mercury/mercury wastes and tools for implementing this Regional Plan.
- iv. National Mercury storage and disposal projects. Following the successful conclusion of the project in Argentina and Uruguay, a similar project is currently being implemented in Mexico and Panama. At the results workshop that took place in Mexico last 3-4 July, both countries delivered project results: national inventories, strengthening of interagency committees, assessment of basic management options, and identified potential sites for interim storage of mercury and mercury waste. Mexico and Panama expressed the need for technologies on the environmentally sound storage and disposal of mercury and its waste.

### **Future plans of the partnership**

- i. Implementation of Phase 2 of the Kyrgyz Republic Primary Mercury Mine Project will be continued. This project supports the Kyrgyz Republic transition away from primary mercury mining to a more sustainable economic activity.
- ii. Encourage the environmentally safe storage/disposal of mercury from major sources, such as but not limited to, decommissioned plants in the chlor-alkali industry and from by-product mercury generated by the large scale mining industry.
- iii. Encourage development and implementation of national policies which restrict trade in mercury and sequester rather than export mercury in countries with significant mercury exports.
- iv. Priority activities of the partnership include: a) Working with partners, governments and other interested stakeholders to reduce or eliminate the production and export of mercury from large scale primary mining; b) Working with the relevant industry sectors, governments, and other interested stakeholders to determine how much mercury will become available from decommissioning of mercury chlor-alkali plants (through the chlor alkali partnership) ; and the quantity of by-product mercury generated from non-ferrous metal processing, gold mining and oil/gas production c) Working with relevant industry sectors, governments and other relevant stakeholders to establish a nation by nation global mercury inventory; d) Developing industry sector plans for the storage of mercury from chlor-alkali plants, non-ferrous metal processing, and oil/gas production; e) Gathering additional data on the extent to which the existing waste infrastructure could be used for elements of the surplus mercury storage needs for the near term at least; f) Assessing and facilitating availability of options and technologies for storage or final disposal of excess mercury supply from other sources; g) Promoting the conduct of workshops related to mercury management with the participation of all relevant stakeholders in order to disseminate information and initiatives at regional level; and h) Facilitating the implementation of export ban legislation in additional countries or regions.

### **Mercury releases from cement industry**

29. The World Business Council for Sustainable Development (WBCSD), Cement Sustainability Initiative (CSI) is leading this partnership area.

30. The objective of this partnership area is to minimize mercury releases to the environment from cement manufacture. The partnership area aims to supplement existing programs in key, strategically selected ways to ensure that reductions are globally significant.

31. Key activities in this area include:

- i. The Partnership organized the launch meeting of this partnership area. The launch meeting was held from 18-19 June 2013 in the International Environment House II, Geneva, Switzerland. The meeting provided the most up to date knowledge on mercury releases from cement manufacturing; discussed mercury control and abatement technologies for the industry; presented methods of preparing mercury inventories in the sector; and considered the next steps for the partnership area.

### **Future plans of the partnership**

- i. The partnership area will revise the partnership area business plan according to comments provided in the above meeting. The way forward and future activities will be discussed in PAG 5.

### **UNEP activities and future plans:**

- i. **Global Mercury Assessment 2013: Sources, emissions, releases, and environmental transport**  
The report was published during the intergovernmental negotiation meeting (INC 5) in Geneva, January 2013, and presented to the UNEP Governing Council Meeting (GC) in February 2013 as requested by the GC in 2009. The report presents sources of mercury emissions to air and water. It presents estimates of anthropogenic emissions to air from various sources based on data from 2010 and estimates for releases to aquatic environment. The report also presents the latest information on atmospheric and aquatic chemistry, fate and transport. It is an overall summary report for the policy makers based on a technical background report. The report can be downloaded for free from our website:  
<http://www.unep.org/hazardoussubstances/Mercury/Informationmaterials/ReportsandPublications/tabid/3593/Default.aspx> .
- ii. **Technical Background Report for the Global Mercury Assessment 2013**  
This is a joint UNEP and AMAP\* report that presents the latest and comprehensive information of global mercury emissions and releases to the environment, information on atmospheric and aquatic chemistry and fate and transport of mercury. The report is a fully referenced scientific background report for the Global Mercury Assessment 2013; Sources, Emissions, Releases, and Environmental Transport. The report can be downloaded for free from our website:  
<http://www.unep.org/hazardoussubstances/Mercury/Informationmaterials/ReportsandPublications/tabid/3593/Default.aspx> .
- iii. **Mercury Toolkit for Identification and Quantification of Mercury Releases (2013)**  
This publication is aimed to assist countries in developing inventories of mercury releases, to evaluate the risks from various sources. It provides a methodology, illustrative examples and extensive information on mercury release sources. The “Toolkit” has been revised in 2013 based on experiences in using it and new data and exists in two versions:
  1. "Inventory Level 1" provides a simplified version of the Toolkit, as well as calculation spreadsheets and a reporting template, to make the development of an overview mercury inventory considerably easier.
  2. "Inventory Level 2" is the comprehensive version, including a detailed description of all mercury sources, useful for anyone wishing to learn more about a specific mercury release source, including environmental authorities and researchers.

## Future plans of UNEP

- i. Development of an E-learning platform for the UNEP Inventory Toolkit and training trainers:
  1. UNEP in collaboration with UNITAR is developing an online e-learning platform to introduce the principles of the Toolkit to first time users. This platform will also serve as a reference tool for trained users. The online tool will include training material organized in an online library, with eight different training modules, a forum of discussion and key links to other resources.
  2. UNEP is also developing a course for potential future trainers in various regions (training of trainers). Representatives of the MEA regional centers have been invited to this training course. The objective of this course will be to make new trainers fluent in the use and understanding of the Toolkit. They then would be able to convey this knowledge to Governments and assist in developing inventories. UNEP plans to deliver this training in a five-day course to train the potential trainers on using the mercury toolkit.
- ii. Global Mercury Assessment 2019 (year to be confirmed): Sources, emissions, releases, and environmental transport. The UNEP Governing Council in 2013 requested UNEP to update the 2013 report within 6 years.
- iii. GEF projects: Supporting the development of national mercury inventories and action plans: UNEP is about to initiate several projects focused on the development of full national inventories on mercury sources and their releases, using the updated UNEP Toolkit for identification and quantification of mercury releases (2013); and based on the inventories develop a national action plan on mercury management with specific action plans for key sectors. Some of the projects are national projects (focused on one country) and some are executed as regional project including several countries. Some of the projects also contain additional components such as mercury emission measurements, and pilot projects on waste. These projects will assist the countries in building capacity for identification of mercury sources and priority actions to address mercury issues under the Minamata Convention. The countries where such project are being initiated or are planned are:
  1. China (Key partners: Ministry of Environmental Protection, Duration: 24 months, start date: 01.02.2013, budget: 1 mio. China will develop a detailed mercury releases inventory in two provinces, Guizhou and Hunan, where mercury management is a priority.)
  2. Russia (Key partners: Ministry of Natural Resources and Environment ,SRI Atmosphere, Duration: 24 months, start date: 05.02.2013, budget: 1 mio)
  3. GRULAC (Argentina, Cuba, Ecuador, Nicaragua, Peru and Uruguay) (Status: Submitted to GEF 17 July 2013, Key partners: Basel Convention Coordinating Center-Stockholm Convention Regional Center for Latin America and the Caribbean Region in close cooperation with the governments, Duration: 36 months, budget: 1 mio)
  4. EECCA (Belarus, Kazakhstan, Ukraine) (Status: in preparation, Key partners: UNEP GRID Arendal, in close coordination with governments, Duration: 36 months, start date: 01.2014, budget: 1 mio)
  5. Brazil (Status: in preparation, Key partners: Ministry of Environment of Brazil, Duration: 36 months, budget: 1 mio)
  6. Africa (Cameroon, Ethiopia, Kenya, Nigeria, South Africa, Tanzania and Zambia (to be confirmed)), (Status: in preparation, Key partners: groundWork, Friends of the Earth South Africa, in close coordination with governments, Duration: 36 months, budget: 1 mio)
  7. Asia (Cambodia, Indonesia, Pakistan and Philippines (to be confirmed)) (Status: in preparation, Key partners: UNEP IETC, in close coordination with governments, Duration: 36 months, start date: 01.2014, budget: 1 mio)
  8. India (Status: In preparation, Duration: 36 months, budget: 1 mio).

- iv. GEF Project: Reducing global and local environmental risks from the primary mercury mining in Khaidarkan, the Kyrgyz Republic. Objective: The main objective of the project is to (i) identify and promote economic alternatives to mercury mining (such as mining and processing of gold and non-metallic minerals as well as other non-mining small-scale business development) and (ii) prepare for remedial and preventive measures at areas identified as high-risk priorities to address in and around the Khaidarkan mercury mine and smelter. In addition the project will enable a comprehensive assessment and monitoring of environmental and health risks and impacts of the mercury mining and improve knowledge and awareness of policy makers and local residents about environment and health risks. These project components will collectively contribute towards the effort of securing an agreement by the central authorities of Kyrgyzstan and the local community to transform the primary mercury mine and the community in a socially and environmentally responsible manner.  
Key Partners: State Agency on Environment Protection and Forestry; Duration: 3 years; Start date: May 2013; Status: Under Implementation; Total GEF grant:\$ 944,000
- v. GEF Project: Strengthening global capacity for monitoring and assessment of mercury levels in humans and the environment. Objectives: This project aims to foster improved coordination and to harmonize approaches between programmes monitoring environmental concentrations and human exposure to mercury, and to ensure that adequate laboratory capacity is available in each region to provide accurate and comparable data on human exposure to and environmental concentrations of mercury as part of a global mercury monitoring system. Key Partners: UNEP DTIE Chemicals; Duration: 24 months; Start date: 01.11.2013; Total GEF grant:\$ 1 Mio; Geographic Scope: Global.
- vi. GEF project: Development of national and regional action plans on key priority issues on mercury management. Objectives: This project aims at bringing most countries in the globe to a minimum baseline level by developing national inventories and action plans in countries that have not participated in the UNEP/ GEF mercury projects. Based on that information, regional action plans on mercury management will be developed. Items such as: mercury storage, mercury amalgams and medical use, mercury in products, and releases from industrial processes will be included. Key Partners: UNEP DTIE Chemicals (EA) in close cooperation with Basel Regional Centres; Duration: 36 months; Type of project: FSP; Status: in preparation; Total GEF grant:\$ 6 M; Geographic Scope: Global (4 regions).
- vii. GEF Project: Development and demonstrate good practices for the storage and disposal of mercury. Objectives: To develop good practices for the storage and disposal of mercury that are compatible with the Basel Convention technical guidelines and with the Minamata Convention on Mercury. To demonstrate good practices in a series of national circumstances that provide different considerations of BAT/BEP. Key Partners: UNEP DTIE Chemicals (EA) in close cooperation with Basel Regional Centres; Duration: 48 months, Type of project: FSP; Status: in preparation; Total GEF grant: \$ 4 M; Geographic Scope: Global (national demonstration sites to be determined).
- viii. GEF Project: Strengthening global capacity in the shift to mercury free measuring devices in the health sector. Objectives: To project aims to strengthen global capacity in the health sector to transition from mercury to mercury free measuring devices. To train the health sector adopt policies in the use of mercury free devices, use alternatives to mercury added measuring devices, and the environmentally sound management of end-of-life mercury added medical devices using the Basel Convention technical guidelines and provisions in the Minamata Convention on Mercury. Key Partners: UNEP DTIE Chemicals (EA) in close cooperation with WHO Public Health and Environment, Health Care without Harm, Duration: 48 months, Type of project: FSP; Status: in preparation; Total GEF grant: \$ 3 M; Geographic Scope: Global (national demonstration sites to be determined).



## **Communication and awareness rising**

32. The Partnership has made efforts to improve communication and outreach. The session will discuss what more needs to be done to insure that good practices identified by the Partnership are taken up by governments. Highlighting or better communicating products and results of the Partnership to donors will also be important to improve financing of future activities.

### 33. Key activities of UNEP

- i. The Global Mercury Partnership organized a Partnership Event at INC 5, presenting Partnership activities, successes as well as remaining challenges across the areas. Key findings from the Global Mercury Assessment 2013 were also presented. Further, the WHO shared an overview on mercury-free health care. The presentation is available [http://www.unep.org/hazardoussubstances/Portals/9/GMP\\_final\\_12.01.2013.pdf](http://www.unep.org/hazardoussubstances/Portals/9/GMP_final_12.01.2013.pdf)
- ii. Mercury: Time to Act (2013): The report was published and distributed during the intergovernmental negotiation meeting (INC 5) in Geneva, January 2013. The report speaks directly to governments involved in development of the global treaty on mercury. It presents updates from the UNEP Global Mercury Assessment 2013 in short and punchy facts and figures backed by compelling graphics that provide governments and civil society with the rationale and the imperative to act on this notorious pollutant. The report can be downloaded for free from our website: <http://www.unep.org/hazardoussubstances/Mercury/Informationmaterials/ReportsandPublications/tabid/3593/Default.aspx>
- iii. The Global Mercury Assessment was presented at a press conference at fifth meeting of the Intergovernmental Negotiations Committee.
- iv. Some of the projects of the UNEP GMP were highlighted in the UNEP Regional newsletters.

## **Future plans of UNEP**

- i. An exhibition space will be organized on the opening day of the ICMGP by UNEP, highlighting the key messages of the GMP. GMP is also on the steering committee and represented in various parts of the conference.
- ii. UNEP will have an opportunity to have a side event to show case the work of GMP at the high level segment of the Conference of Plenipotentiaries on the “Minamata Convention on Mercury” which will be held in Minamata and Kumamoto, Japan, from 9 to 11 October 2013
- iii. The secretariat would request the partners within the UNEP GMP to submit ideas for the Story of the month.
- iv. The secretariat encourages the GMP members to utilize the email list serves more frequently for sharing information and results.
- v. The secretariat will ask the Partners to provide results and outcomes of their projects on a more regular basis. This information will help the secretariat to keep the website up to date.