



**United Nations
Environment
Programme**

Distr.: General
18 February 2016

English only

**Global Mercury Partnership
Partnership Advisory Group, Seventh meeting**
Jordan, 8 March 2016

**Report on activities undertaken within the UNEP Global Mercury
Partnership (August 2014 – December 2015)**

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 UNEP secretariat 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 leads.

The Partnership Advisory Group may wish to provide input on the report on activities, and use such information to discuss the future activities of the Partnership.

Annex

I. Introduction

The Overarching Framework of the UNEP Global Mercury Partnership specifies that one of the responsibilities of the UNEP Global Mercury Partnership Advisory Group is to report on activities undertaken within the UNEP Global Mercury Partnership.

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.

This report provides a list of the highlights of partnership area activities over the period of August 2014 to December 2015, per partnership area. It is based on the input received from the leads and co-leads of the partnership areas.

II. Overview

Participation

The number of official partners is steadily growing:

- On 1 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.
- As of 30 December 2015, there were 149 official partners in the Global Mercury Partnership, including 27 governments, 8 intergovernmental organizations, 59 non-government organizations, and 55 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.

Organisation

Mr. Atle Fretheim and Mr. Mitch Cuna have been serving as co-chairs of the partnership since 2013. Individual partnership areas are led by the following organisations.

- Artisanal and small scale gold mining: the Natural Resources Defence Council (NRDC), UNEP and the United Nations Industrial Development Organization (UNIDO)
- Mercury cell chlor-alkali production: the Government of the United States of America
- Mercury air transport and fate research: the CNR- Institute of Atmospheric Pollution Research, Italy and the Biodiversity Research Institute, USA
- Mercury-containing products: the Government of the United States of America
- Mercury releases from coal combustion: the International Energy Agency Clean Coal Centre
- Mercury waste management: the Government of Japan
- Mercury supply and storage: the governments of Spain and Uruguay

- Mercury releases from cement industry: the World Business Council for Sustainable Development, Cement Sustainability Initiative

Leads and co-leads met at the International Conference Center in Jeju, the Republic of Korea, on 16 June 2015 in the margins of the 12th International Conference of Mercury as a Global Pollutant (ICMGP).

UNEP convened regional awareness raising and knowledge sharing event in the margins of the Minamata Convention Regional Consultations in Asia and the Pacific (Jakarta, Indonesia, 21 January 2016), Africa (Lusaka, Zambia, 3 February), Central and Eastern Europe (Brno, Czech Republic, 3 February) and Latin America and the Caribbean (Montevideo, Uruguay, 10 February). The outcome from these events are reported in UNEP(DTIE)/Hg/PAG.7/4.

Delivery

The activities of the Partnership were delivered in the form of the following. Detailed activity reports from individual partnership areas are provided in the next section.

- Guidance materials
- Information gathering and exchange
- Advocacy and awareness raising
- National and regional strategy planning
- Demonstration projects

Future work

The next section includes planned future activities submitted from individual partnership areas. Updated business plans of the partnership areas are compiled in a separate document UNEP(DTIE)/Hg/PAG.7/5. The Partnership Advisory Group may wish to note some of the documents for the 7th Session of the Intergovernmental Negotiation Committee mentioning the activities of the Partnership, including the following: documents on effectiveness evaluation and interim storage)

- Compilation and analysis of the means of obtaining monitoring data in relation to effectiveness evaluation (UNEP(DTIE)/Hg/INC.7/12), mentioning the possibility of the interim secretariat working with the UNEP Global Mercury Partnership and other relevant partners to identify how the diverse mechanisms described in the document could contribute to the provision of comparable monitoring data, in particular considering the attributes of the monitoring required, the relevant methodologies for sampling and evaluation, and the core media.
- Draft guidance on developing a national action plan to reduce and, where feasible, eliminate mercury use in artisanal and small-scale gold mining (UNEP(DTIE)/Hg/INC.7/17), drafted by the members of the Partnership.
- Environmentally sound interim storage: compilation and summary of submissions; identification of relevant sections of the Basel guidance; and a roadmap for work on interim guidance (UNEP(DTIE)/Hg/INC.7/18), mentioning the possibility of the interim secretariat preparing, in cooperation with the secretariat of the Basel, Rotterdam and Stockholm conventions and the UNEP Global Mercury Partnership as appropriate, draft guidelines on interim storage, based on relevant sections of the Basel Convention technical guidelines and other relevant sources

III. Activity Report by Partnership Area

1) Artisanal and small-scale gold mining

- a) NRDC, UNEP, and UNIDO are jointly leading the artisanal and small-scale gold mining partnership area.
- b) The objectives of the partnership area are:
 - Support governments in setting national objectives/targets
 - Eliminate worst practices and promote alternatives
 - Exploring innovative market-based approaches
- c) Key activities in this area include:

Priority Action 1: Support governments in setting national objectives/targets

- The ASGM Partnership produced document entitled, “Guidance Document: Developing a National Strategic Plan to Reduce, and Where Feasible, Eliminate Mercury Use in Artisanal and Small Scale Gold Mining,” Written by members of the UNEP Global Mercury Partnership ASGM Area, the document provides: (1) guidance to countries in formulating NAPs that are compliant with the Minamata Convention, and (2) technical, legal and policy information on issues related to ASGM that can be useful when preparing and implementing the NAP. The draft document was presented at INC6, after which comments were solicited from stakeholders. Comments have been addressed and a new version of the document will be presented at INC7.
- Since 2004, Solidarité Guyane working with the National Institute for Minamata Disease (NIMD) has collected samples in the Amerindian villages of the French Amazon in the Upper Maroni region to determine mercury levels in pregnant villagers who have been affected by illegal gold mining in French Guiana, in order to raise awareness among government and other stakeholders on these risks.
- The Sustainable Development Policy Institute (SDPI) is working with KPK Environment Protection Agency of Khyber Pakhtunkhwa and the Environmental Protection Agency (EPA) of Gilgit Baltistan to conduct a *Study of Environmental and Health Impacts resulting from Mercury Use for ASGM on Population along Selected Rivers in Gilgit Baltistan, Northern Pakistan*. A visit by SDPI researchers in July, 2015, have further confirmed the earlier reports regarding ASGM activities (11 sites) in Northern Pakistan. In Gilgit Baltistan areas (along Indus, Hunza & Chitral rivers) the heavy panned gold particles concentrates and is recovered the precious metal by pouring the mercury amalgamated concentrates over home-made kitchen hearth (used for cooking food and providing heat) in closed huts, with a small entrance door, no windows/ventilators. A follow up to the July, 2015 visit to the confirmed ASGM activity sites in Gilgit Baltistan, will be led by a 2-3 member SDPI research team to conduct a more detailed survey and field work in October November. In light of the results/findings from the above scheduled/survey, a report would be prepared and shared with EPAs/Ministry of Environment, to develop

ASGM Pakistan National Action Plan (NAP), among others, to also include the following broad activities: (1) Survey and monitoring to establish ASGM/Mercury Hot Spots in Northern Pakistan; (2) Assessment of indoor air mercury contamination in/around mercury amalgam roasting points within local huts; (3) Impacts on ecosystem in the area and health among local population due to ASGM/mercury exposure; (4) Awareness raising/occupational health & safety alternative earning means for miners; (5) Phasing out ASGM/mercury use, promotion of alternatives to mercury use for ASGM; and (6) Mercury contaminated Site remediation.

- The European Environmental Bureau (EEB)/ Zero Mercury Working Group (ZMWG) is working with NRDC, groundWork, AGENDA, and Friends of the Nation on the project, *Contributing to the Preparation/Implementation of the Minamata Convention on Mercury, with a focus on Developing Strategies for Phasing out Mercury added products and on reducing mercury use in Artisanal and Small Scale Gold Mining through Development of National Action Plans*. The project supports the preparation for ratification and early implementation of the Minamata Convention on Mercury in four countries in Africa. In two countries the project focuses on phase out of mercury products. For ASGM, the project supports the development of NAPs in Tanzania and Ghana. NGOs from each of these countries assist their governments by providing experience on policy matters and on technical issues. They identify and engage with key stakeholders and mining communities, organize meetings, and, as requested by governments, assist in the drafting of the NAP. The project also assists in strengthening national miners group that will be key to NAP implementation. Until now consultation meetings have been held with key stakeholders and government agencies in both countries. Furthermore a Regional Stakeholders' Workshop was organized in Tarkwa - a big mining hub in Ghana. The meeting contributed to increasing participants' awareness and knowledge on the Minamata Convention and also provided the space for stakeholders to make recommendations of the action points to be included in the National Action Plan. The workshop brought together over 60 stakeholders from Government, Civil Society, Private sector, Academia and miners. In Tanzania, AGENDA visited Nzega mining area, Tabora region and Geita mining area Geita Region as well as Chunya mining area in Mbeya region. The visits objectives were to conduct Initial engagement and assessment of the current practices and technologies within mining centers of Tanzania. A one day meeting was held in Geita with 30 participants (representatives of Miners from different regions together with Ministry of Energy and minerals representatives as well as local government authorities) for awareness raising, sharing information, experience and engagement. During the meeting the project was introduced while updating stakeholders on progress of ratification of the Minamata Convention by the government together with the need for NAP preparation and relevant content. Work continues with engagement with ASGM communities and contacts with the national authorities. By the end of the project, it is hoped that, countries' representatives will have more clarity and direction on reducing mercury use and release in ASGM, whilst becoming well prepared to put in place the Convention obligations in this area.

- Syracuse University is currently working on the project *Mapping the Fate of Quicksilver: Mercury Contamination from Artisanal Gold Mining in Senegal*, projected to end in May of 2018. The Senegalese Sabodala Deposit – the largest in West Africa, extending over a 230 km² region and estimated to contain over one million ounces of gold – is mined predominately by artisanal methods. This site is representative of environmental conditions at other deposits in West Africa. It is also a site where ASGM activities have only recently intensified (within the past decade), allowing for an investigation focused solely on contemporary emissions. In the study, the University seeks to trace the transformation and fate of mercury waste in mining-contaminated watersheds; evaluate hydrologic and biogeochemical conditions that affect evasion, fluvial transport, and bioavailability of mercury; and determine how mercury released from artisanal gold mining enters the aquatic food web. To achieve these goals, they will examine mercury contamination resulting from mining communities in three watersheds across the Kedougou region of the Sabodala Deposit in southeastern Senegal. They expect that mercury concentrations will be highest in soils closest to the mining sites. In the dry season, downstream mercury transport will be low, while in the wet season values will be high. Fluvial mercury will be transported largely with suspended matter during storm events. Also, atmospheric mercury losses will dominate during the dry season, while fluvial losses will dominate during the summer rains. A high fraction of methyl mercury will be found in saturated streams and sediments, with much lower values in upland soils. Isotopic signatures of elemental mercury used by miners will be similar to those in sediments, soil, water, invertebrates, and fish. If other researchers are working in Senegal or West Africa, the University would appreciate connecting with them to collaborate and share findings.
- The Natural Resources Defense Council (NRDC), together with other partners, held a special session at ICMGP 2015 ASGM on, "*Mercury in Artisanal Gold Mining - the Largest Anthropogenic Source and Biggest Challenge for the Minamata Convention.*" This special session invited researchers to describe the latest research on (a) new estimates of mercury use; (b) unknowns surrounding mercury use, emission, release and exposure from ASGM sites; (c) ecosystem response to ASGM mercury releases; (e) how Minamata requirements involves researchers; (f) pilot projects aimed at reduction/elimination of mercury use; (g) remediation of mercury contaminated ASGM sites; and (h) monitoring systems to measure reduction rates of mercury releases from ASGM sites.
- In March of 2015, NRDC along with the Regional Environmental Office for South America and the Mercury Program Officer of the US Department of State (USDOS) hosted a workshop in Lima, Peru focusing on NAP Assistance in South America to Enhance Regional Cooperation. With over 50 participants attending the workshop, representing four Governments, intergovernmental organizations and non-governmental organizations, this arena provided an opportunity for stakeholders to share information, especially on elements of the NAP that might benefit from regional cooperation, such as pilot projects, trade and scientific capacity. The

breakout session on trade yielded a particularly specific proposal or national level research and regional cooperation on trade. Currently NRDC is working with UNEP on a Mercury Trade Assessment and Control in Latin America.

- NRDC collaborated with groundworks of South Africa, USDOS and the World Bank to host in Dar es Salaam, Tanzania, the first Eastern and Southern Africa Regional Forum on Artisanal and Small Scale Gold Mining and the Minamata Convention on Mercury. Topics discussed, included but were not limited to: (1) ASGM requirements found in the Minamata Convention, especially NAPs; (2) formalizing or regulating issues within the ASGM sector; (3) managing mercury trade and preventing diversion; (4) eliminating worst practices; and (5) GEF funding for NAP development. The workshop was successful in that 8 of the 9 participating countries have applied to the GEF for resources to develop NAPs. Also as part of this project, NRDC published the *Step by Step Guide for Countries Applying for Support under GEF Enabling Activities for the Minamata Convention on Mercury*.
- Funded by the GEF, the *National Action Plan on Mercury in the Mozambican Artisanal and Small Scale Gold Mining Sector* project is set to begin in January 2016 with UNIDO as GEF Implementing Agency in partnership with Mozambique's Ministry of Land, Environment and Rural Development (MITADER), Ministry of Mineral Resources and Energy (MIREME) and the World Health Organization (WHO). With an anticipated completed date of December 2017, the outcomes of the project will be to enable participatory stakeholders to manage mercury in the ASGM sector and to finalize the NAP for the endorsement of relevant stakeholders. It is hoped that the Government of Mozambique would then submit the NAP to the Minamata Convention secretariat. The activities of the project will fill the gaps required to develop the NAP, (a) by assisting the Government of Mozambique and ASGM partners to formulate strategies to reduce mercury emissions and (b) by increasing awareness of the risks to human and ecosystem health. The project will also help Mozambique to identify and prioritize hotspot areas for future investment and intervention in the country to promote sound chemical management as a key component of green industrial growth. Lessons learned and experience gained from national capacity building and NAP development in Mozambique can be used as a model approach to be replicated in other countries to effectively address similar issues. The following five outputs are expected from the project: Output 1.1: Information disseminated and project coordination mechanism established; Output 1.2: National comprehensive analysis of ASGM sector completed to support the development and implementation of a road map to reduce mercury emissions and releases; Output 1.3: Institutional and capacity needs assessment completed to develop a public health strategy on ASGM; Output 1.4: Rapid health situation assessment conducted; drafting of the public health strategy initiated and awareness raising workshops organized; and Output 2.1: NAP drafted, finalized and presented to relevant stakeholders.
- Funded by the GEF, the project *National Action Plan on Mercury in the Artisanal and Small Scale Gold Mining Sector in Gabon* is set to begin in January 2016 with

UNIDO as GEF Implementing Agency in partnership with Gabon's Ministry of Forest, Environment and Protection of Natural Resources (MFEPNR) and the Artisanal Gold Council (AGC). The outcomes of the project will be to enable participatory stakeholders to manage mercury in the ASGM sector and to finalize the NAP for the endorsement of relevant stakeholders. It is foreseen that the Government of Gabon will then submit the NAP to the Minamata Convention secretariat. The activities of the project will fill the gaps required to develop the NAP in the following ways: (a) By assisting the Government of Gabon and ASGM partners to formulate strategies to reduce mercury emissions; and (b) By increasing awareness of the risks to human and ecosystem health. The project will also help Gabon to identify and prioritize hotspot areas for future investment and intervention in the country to promote sound chemical management as a key component of green industrial growth. Lessons learned and experience gained from national capacity building and NAP development in Gabon can be used as a model approach to be replicated in other countries to effectively address similar issues. The following five outputs are expected from the project: Output 1.1: Information disseminated and national coordination on ASGM established; Output 1.2: National comprehensive analysis of ASGM sector completed to support the development and implementation of a road map to prevent and reduce mercury use, emissions and releases; Output 1.3: Institutional and capacity needs assessment completed to develop a public health strategy on ASGM; Output 1.4: Rapid health situation assessment conducted; drafting of the public health strategy initiated including a curriculum for professionals and awareness raising workshops organized; and Output 2.1: NAP drafted, finalized and presented to relevant stakeholders for interactive feedback.

- Funded by SAICM, the project *Reducing mercury risks from artisanal and small scale gold mining (ASGM) in Côte d'Ivoire* started in October 2012; the project is being implemented by UNIDO in cooperation with the Ministry of Environment and AGC. The objective of the project is to reduce risks and impacts of mercury on human health and the environment in the artisanal and small scale gold mining sector in Côte d'Ivoire. The project aims to: 1) develop a national strategic action plan on mercury and the identification of capacity needs for sound chemicals management, 2) develop and strengthen national chemicals management institutions, plans, programs and activities, 3) undertake analysis, interagency coordination, and public participation activities to mainstream the sound management of mercury in national strategies, and thereby informing development assistance cooperation priorities. The project is expected to produce the following: (1) National mercury inventory in ASGM sector; (2) National ASGM assessment and strategic plan; and (3) Guideline of good practices for the management of mercury in ASGM sector. This project will be able to build on previous work conducted by the Young Volunteers for the Ivory Coast Environment (Jeunes Volontaires Pour L'Environnement Cote d'Ivoire), which made an inventory of mercury in ASGM communities found in some Ivory Coast regions. The project was implemented in the Ivory Coast communities of Hiré (Divo), Kokoumbo and Kpèbo (Toumodi). These are regions where industrial and artisanal mining of gold is known to be taking place. The project activities consisted

in training on ASGM mercury inventory, performing mercury inventory on ASGM in Cote D'Ivoire and realizing public information on risks and dangers related to mercury in ASGM activities. The project produced a report on mercury inventory for two communities in Cote d'Ivoire, which includes: methods, data collected, results and conclusions in the amount of mercury used in ASGM.

- Funded by SAICM, the project *Reducing mercury risks from artisanal and small scale gold mining (ASGM) in Mali* is being implemented by UNIDO in cooperation with the Ministry of Environment and Sanitation of Mali and AGC. The project aims to: 1) develop a national strategic action plan on mercury and the identification of capacity needs for sound chemicals management, 2) develop and strengthen national chemicals management institutions, plans, programs and activities to prepare for the implementation of Minamata Convention, 3) undertake analysis, interagency coordination and public participation activities to mainstream the sound management of mercury in national strategies and thereby informing development assistance cooperation priorities. The project is expected to yield: (1) National mercury inventory in ASGM sector and (2) National strategic action plan.
- Funded by a private investor the *Upper Goulburn River Feral Mercury Project* is underway and the Australian Federal Environment Department is working towards remediating a large amount of feral mercury (~4,900 tons) which was lost to the environment following historical (1854-1920) artisanal mining operations in a large high rainfall river catchment. Basic field survey has been completed. Large tonnages of mercury and arsenic polluted crushing plant material have been identified. A number of other carcinogenic metals have also been identified and there are serious issues with mercury off gassing from these crusher fines piles. Airborne dust in the catchment contains mercury, arsenic and thorium amongst other metals.
- In September 2014, the Federal Ministries of Environment and Mines and Steel Development, Nigeria in partnership with Environmental Law Institute (ELI), USA organised an Inter-ministerial consultation on Artisanal and Small Scale Gold Mining (ASGM). The goal of the consultation was to bring together key stakeholders to develop strategies to address mercury contamination and lead exposure in ASGM activities in Nigeria. The consultation was an activity undertaken under ELI's project in Nigeria on "Developing regulatory approaches to addressing the environmental, health and safety issues associated with ASGM activities". The project has produced a draft paper on Legal, Policy, and Institutional Recommendations to Address Mercury and Lead Exposure from Artisanal and Small-Scale Gold Mining in Nigeria.
- The Federal Ministry of Environment, Nigeria in collaboration with the Federal Ministries of Mines and Steel Development and Health forwarded a Proposal on the project "National Action Plan on Mercury in the Nigerian Artisanal and Small-Scale Gold Mining Sector" to the GEF for funding, through the United Nations Industrial Development Organisation (UNIDO). Project is expected to be approved for implementation in 2016.

- In Ghana, an Integrated Assessment of ASGM was conducted between 2012 and 2015 by researchers from Ghana and North America. The activity brought together 26 Ghanaian scientists from across disciplines (human health, natural sciences, social sciences and economics), and long with international experts including some Partners (Keane from NRDC, Basu from McGill University, Buck from Biodiversity Research Institute). The group included key researchers from the Ghanaian government, including individuals from the Ghana Health Service, Ghana EPA, and the Science, Technology Policy Research Institute (STEPRI). Together they reviewed >300 papers and 10,000 datapoints to develop evidence-based options to address ASGM nationally. Policy/response options were further developed using the Delphi method. The dissemination meeting was opened by the country's Minister of Environment, Science, Technology and Innovation (Hon. Mahama Ayariga) with findings discussed with 38 stakeholders from 28 Ghanaian Institutions. A 4-pg summary of the entire project is available (<http://asgmresearch.weebly.com/>) as well as a collection of 17 research articles in a special, online issue of International Journal of Environmental Research and Public Health (http://www.mdpi.com/journal/ijerph/special_issues/asgm). The activity was supported by funding from the Graham Environmental Sustainability Institute (University of Michigan).
- On November 5-6 2015, the Carnegie Institution for Science's Carnegie Amazon Mercury Project (Carnegie/CAMEP) together with Peru's Ministry of Environment (MINAM), Ministry of Health (MINSAL), Wake Forest University and the Regional Government of Madre de Dios Consultative Committee on Heavy Metals organized the Second Forum on Mercury and Environmental Health in Madre de Dios, a two day research and policy conference held at the National Amazonian University of Madre de Dios (UNAMAD) in Puerto Maldonado. This conference presented new scientific research on mercury exposure and risks in ASGM zones, and public discussions of national and regional policy initiatives to reduce mercury exposure to human populations and ecosystems in Madre de Dios, Peru. Notable were presentations of the six of the first-ever UNAMAD student theses that focused on the science of ASGM related mercury effects and risks -- indicating that local youth and the academic community are becoming increasingly engaged and active on this issue. Researchers from Peru, Brazil, Cuba, Colombia and the United States presented recent mercury studies conducted in Madre de Dios, and policy experts from MINAM, MINSAL, UNITAR and several NGOs discussed policy initiatives including a special roundtable on the Minamata Convention which was ratified in Peru in October 2015.
- The US DOS has funded BaliFokus (BF) and Ban Toxics (BT) to implement a project entitled "Developing Mercury Inventories in Artisanal and Small-scale Gold Mining Sector in South East Asia (and Mongolia)." The project aims to improve mercury trade reporting in five Southeast Asian countries and Mongolia. It also promotes the development of the Local Action Plans (LAPs) to eliminate mercury in ASGM and improve the governance of ASGM sector, in conjunction with the

implementation of the ASGM National Action Plans in Indonesia, Philippines and Mongolia. In Indonesia, BF works with three local governments (and national agencies) to promote LAPs on the elimination of Hg in ASGM while in the Philippines, BT works with five local government units (LGU) and youth groups to develop a similar approach to LAPs. BT also facilitated program implementation in Mongolia. The project will organise a regional mercury trade workshop before/after the Asia-Pacific regional consultation meeting in Jakarta prior to the INC7. The workshop will aim to improve the reporting and communication regarding mercury export-import among countries. The project also conducted inventories of mercury use at the field level. The results of the inventories will be considered as an input to the national mercury inventory updates.

- In Zimbabwe, a workshop was held on December 16 on the topic of “Visualising Artisanal and Small-Scale Mining: Environmental Strategies for the Future.” The event provided a platform for dialogue with artisanal and small-scale miners, government officials, equipment manufacturers, Environmental Impact Assessment consultants, NGOs and others to share ideas, challenges and reflections on priorities to feed into the development of the Minamata Convention National Action Plan. The workshop was facilitated by the Zimbabwe Environment and Mining Institute in conjunction with the Environmental Management Agency, supported by the University of Edinburgh’s Centre of African Studies and the Economic and Social Research Council (ESRC). Longitudinal research was presented on environmental management strategies for artisanal and small-scale mining and models for addressing associated land use, safety, empowerment and regulatory issues, drawing on cases from Insiza and Kadoma. The event featured speeches provided by the Minister of Environment, Water and Climate as well as the Zimbabwe Miners Federation, the Ministry of Mines and Mining Development and the Ministry of Small and Medium Enterprises and Cooperative Development, among others, addressing diverse forms of artisanal and small-scale gold mining. Local artists were engaged to enrich the dialogic process, and group discussions utilized participatory visual methods to explore challenges in artisanal and small-scale mining communities from various perspectives and solutions for moving forward. The workshop forms part of a longer term ESRC-supported research partnership using participatory approaches for addressing environmental management and artisanal gold mining.

Priority Action 2: Eliminate worst practices and promote alternatives

- A capacity building project in Papua New Guinea is being led by the Mineral Resources Authority (MRA) Small Scale Training Centre. The Training Centre and Training Programs are funded by the Government of Papua New Guinea (PNG) through the Minerals Resources Authority (MRA). The Training Centre is located in a historical rural mining community where miners and interested people from around the country undergo a two-week training. Courses are offered in four different levels, Level one being basic, with the levels advancing accordingly. Levels 3 and 4 are yet to be developed. There are 11 modules offered during the two weeks,

one week of theory and one week of practical and field trips to mining sites. One other project was a Mine Closure Project for community livelihood after a large scale mine (Ok Tedi) ceased its operation. The intent of the project was to use mercury free gold extraction methods to capture very fine mill processed gold, and at the same time to run awareness and training programs on mercury safe handling, safe use and safe disposal. Other programs include raising awareness on the use of mercury, dangers and proper disposal in other parts of the country. The alluvial mining sector in the country suffers from lack of technical capacities for miners, as well as from lack of funding assistance to afford environmentally friendly and safe equipment, especially for women miners who are exposed to hazards including but not limited to long hours of exposure to mercury. Strengthening is needed for (a) legal institutions to draft policies and tighten up existing laws and policies (b) academic institutions to conduct research into mercury issues and other SSM related matters (c) alluvial miners to be organized for easier implementation and effective regulation of the sector. Most important is the establishment of a database for miners throughout the country. The sector does not have a current database for miners in the country, or even the mining sites, thus making it difficult for regulating authorities to allocate funds, implement projects and conduct training were it is most needed.

- UNEP is working with Yayasan Tambuhak Sinta to build capacity for mercury-free ASGM methods and raise awareness on the risks of mercury use at the national, regional, and local level. The project was completed in early 2016. This project had three main components. 1) Policy support to the national government for an update to the ASGM national action plan to ensure compliance with the Minamata Convention, 2) data gathering on mercury use in ASGM in several sites, and 3) a demonstration project and training center for mercury-free ore processing. The final report is available on the UNEP Global Mercury Partnership web site.
- In the Philippines several projects focused on aspects of ASGM have been undertaken. The Department of Environment and Natural Resources (DENR), Department of Health (DOH), and Ban Toxics (BT) of the Philippines have been working on a project to *Improve the health and environment of artisanal gold mining communities in the Philippines by reducing mercury emissions*. Funded by the GEF, the project was designed to assist the government to develop, implement and facilitate the demonstration and replication of mercury reduction/elimination projects, enable local and national stakeholders to receive health, techniques and technology trainings, and promote policy reforms based on the lessons learned to reduce mercury use, emission and exposure in ASGM activities. The project will evaluate the results of the mercury free technology pilot tests to determine the feasibility of scaling up such technologies nationwide in the Philippines. The project is expected to yield the following: 1) A subnational ASGM institution is established to facilitate the process of mercury reduction/elimination; (2) Health education, technique and technology programs and mercury poisoning surveillance program that can be later replicated nationwide developed and capacity increased through the

delivery of training programs; and (3) National and local stakeholders in the Philippines are sensitized and able to replicate technical successes at other ASGM sites aiming to reduce overall mercury use, emissions and exposure in country; and important lessons learned will contribute and promote sound mercury management policies in the future.

A similar project is undertaken by BT with its partners Dialogos, University of Copenhagen, GEUS, and ICOEPH entitled, Reducing Mercury in the Philippines small-scale gold mining, Phase 2 (Phase 2). The Phase 2 project is a continuation of the 3-year project in ASGM hotspots in the country with a focus on mercury reduction. The Phase 2 project also seeks to engage more women miners in the mining community and teach them gravity concentration methods.

BT with support from the US Department of State has undertaken a gender study on the role of women in 2 ASGM sites in Kalinga province and Camarines Norte provinces. The study sought to better understand the role of women in mining communities and bring to light gender dynamics in the subject mining communities.

- Philippines and Indonesia. The project Developing Mercury Inventories in Artisanal and Small-scale Gold Mining Sector in South East Asia (and Mongolia) supported by the US Department of State grant No. S-LMAQM-14-GR-1251 implemented by BaliFokus (BF) and Ban Toxics (BT). The project aims to improve the reporting in Southeast Asian countries and Mongolia and promote the development of ASGM Local Action Plans to eliminate mercury in ASGM and improve the governance of the ASGM sector in conjunction with the implementation of the National Action Plans on ASGM in Indonesia, Philippines and Mongolia.

In Indonesia, BF works with 3 local governments and the national agencies to promote the Local Action Plan (LAP) on the elimination of Hg in ASGM. While BT in the Philippines, works with 5 local governments and youth groups to develop similar approach to LAP. BT is also facilitating the program implementation in Mongolia. The project also aims to organise a regional mercury trade workshop before/after the Asia-Pacific regional consultation meeting in Jakarta prior to the INC7. The workshop aims to improve the reporting and communication regarding mercury export-import between countries. Within the project, the proponents also conducted an inventory of mercury used in several ASGM areas, to feed and improve the UNEP mercury inventory toolkit level-2 default factor based on the Philippine and Indonesia field inventories. The exercise was conducted with the support of Dr. Paul Cordy.

The results of the level-2 Hg inventories also will be considered as an input to the national mercury inventory updates.

BF supported the establishment of APRI (Asosiasi Petambang Rakyat Indonesia) or the Indonesian Small-scale Miners Association in 2014. Last month APRI made a historical declaration that Indonesian miners will stop using hg by 2018.

BF is now facilitating a pilot plant of Hg-free gold processing in Wonogiri to support a community cooperative supported also by the local government of Wonogiri, in Central Java Province.

- The GEF has provided funding for a regional initiative aimed at supporting the Governments of Burkina Faso, Mali and Senegal to improve the health and environment of artisanal and small scale gold mining (ASGM) communities by reducing mercury emissions and promoting sound chemical management. This project, which started in January of 2012, is being implemented by UNIDO in its capacity as GEF Implementing Agency, in cooperation with AGC and the Alliance for Responsible Mining (ARM). The project will strengthen national and local capacity in the three countries by undertaking the following activities: (1) provide technical expertise and support to identify toxic hotspots associated with ASGM and prioritize for intervention; (2) develop and implement national strategic action plans for sound management of mercury in ASGM sector in all countries; (3) develop comprehensive health education and low mercury/mercury free technology training programs; (4) implement pilot mercury reduction/elimination projects in each country; (5) explore potential for fair mined certification via the tools and processes developed by Alliance for Responsible Mining; and 6) document lessons learned from the pilot projects, sharing them regionally, and use them to inform national policy and intergovernmental negotiations on the mercury treaty. The following project results are expected: (1) National strategic action plans are utilized for developing policy framework in Burkina Faso, Mali and Senegal; (2) Pilot projects are replicable and knowledge gained from health and technology trainings can be adopted and behavior changed; and (3) Capacity to manage and monitor mercury through fair trade certification and new regulations. A video on this project, entitled “Improve the Health and Environment of ASGM Communities by Reducing Mercury Emissions and Promoting Sound Chemical Management”, in Burkina Faso, Mali and Senegal, can be found here: <https://www.youtube.com/watch?v=tGwS15rMn9M>
- The Gippsland Environment Groups and Doctors of Australia are continuing their work on the *Gippsland Lakes Ramsar Multi-source Mercury Pollution Study*. The Gippsland Lakes Ramsar consists of 60,015 Ha. Six of the seven river catchments have been subject to Artisanal and Hard Rock Gold Mining since the 1850's. Significant quantities of mercury were lost during gold recovery. A mercury cell ChlorAlkali plant was for over 20 years. Four brown coal power stations currently emit approximately 1.6 tons of mercury per year into the atmosphere. The project primarily the construction of a data base on historical methyl mercury (MeHg) levels in fish from the Ramsar zone, together with wide spread testing of fish from the various rivers and streams in the Ramsar catchment. Potential health impacts on humans and other mammals throughout this region will be investigated. A wide scale river and stream sediment investigation is being developed for all of the rivers and streams flowing into the Ramsar zone together with detailed testing of abandoned historical hard rock crusher fine piles that occur throughout this region. Once all of

the survey data has been compiled, a “trade off frontier” will be developed so that the highest risk areas can be remediated as the first priority. Data already to hand indicates that in many of these areas remediation can be undertaken for minimal cost due to the value of the elements not recovered by historical miners.

- Funded by the GEF, the project *Implementing Integrated Measures for Minimizing Mercury Releases from Artisanal Gold Mining in Ecuador and Peru* is being implemented by UNIDO in its capacity as GEF Implementing Agency, in cooperation with the National Institution on Minerals and Geological Investigation (INIGEMM), ARM and the University of British Columbia (UBC). This GEF multi-focal area project (Chemicals and International Waters) is being implemented in the Puyango-Tumbes river basin located in the south of Ecuador and north of Peru, targeting the Portovelo-Zaruma mining areas located in Ecuador. In the past, tensions have arisen in this region due to contamination of the river detected in Peru which has been attributed to ASGM activities upstream in Ecuadorian territory. This project will demonstrate that substantial mercury release reductions and more cost-effective gold recovery and income enhancement can be achieved by applying an integrated series of measures including capacity building, technology transfer and policy/legal reforms. The expected outputs of the project are: (1) Develop a characterization and diagnostic analysis describing the baseline socio-economic, environmental and human health conditions of target ASGM communities; (2) Design strategies for minimization of mercury releases and enhancement of gold recovery; (3) Training of miners on improved technologies and best practices to reduce mercury use and emissions, while enhancing gold recovery and incomes; (4) Training of miners, national and local authorities, as well as the general public, particularly women and youth, on the dangers of mercury; (5) Develop programs to promote the use of financial tools for miners, and the formalization of the ASGM sector; and (6) The communication strategy will successfully disseminate the project achievements, which in turn will lead to a replication of best practices at a national, regional and international level.
- In a related project, the US Department of State (USDOS) just completed funding a project focused on *Reducing Mercury Use and Release in Francophone West Africa Artisanal and Small-scale Gold Mining* facilitated by AGC, which wrapped up this July. The goal of this project was to improve the understanding of the sector in Burkina Faso and Senegal, principally the mercury and gold production supply chains. The project also aimed to demonstrate alternatives to mercury use in ASGM by introducing new mercury-free processing systems in several pilot locations in both countries, as well as facilitating the replication of these better practices to other ASGM communities surrounding the pilot sites. The project aimed to deliver a self-replicating mechanism that provided alternatives to mercury use in ASGM. This would ultimately lead to environmental benefits and a healthier community for gold miners and their families without diminishing their economic opportunities. Three pilot systems were installed during the course of the project, and two complete baseline inventory were completed during the course of the project.

- The AGC is continuing its work on a project focused on *Reducing the Use and Release of Mercury by Artisanal Gold Miners in Latin America*. The project, funded by USDOS will deliver 4 components in Nicaragua: (1) A technical intervention. (2) A capacity building component to increase the ASGM miners' technical capacity for mercury-free gold mining and improve safe chemicals management. (3) A successful collaboration between the ASGM and LSM sectors that can be generalized into a replicable model. (4) A business model, including the formalization of a mining cooperative, market development for responsible artisanal gold, and networking to promote project replication. Activities in Suriname include field research, networking, developing business models, and evaluating the potential for a mine-to-market mercury-free gold program.
- The Artisanal Gold Council published the first version of a field education flip chart, "Health in Artisanal and Small Scale-Gold Mining. Health professionals can use this material to demonstrate key concepts for the public and can be used for group or individual information sessions. AGC also released the first version of its Retort Guide "Using Retorts to Reduce Mercury Use, Emissions, and Exposures in Artisanal and Small-Scale Gold Mining: A Practical Guide." One of the key messages in the guide that has not often been clearly described is that retorts - although they are a simple technology - have complex operational and handling requirements that must be strictly followed to avoid causing increased human exposure to users and community members. There have been many instances where retorts reduce mercury emissions to the environment but have actually increased local human exposure due to improper use or handling and location. AGC therefore views retorts as a technology that should be used on the path towards the transition to zero mercury use rather than as a permanent feature of the ASGM sector.
- Biodiversity Research Institute, Artisanal Gold Council and Cordy Geosciences are collaborating on a U.S. Department of State-funded project entitled *Development and implementation of artisanal and small-scale gold miner training resources for reducing mercury use and release in South America*. This project is developing a series of formalized training modules that are designed to promote appropriate technologies within the artisanal and small-scale mining sector. The training modules focus on (1) techniques for improved milling and grinding and (2) concentration steps that effectively remove non-target minerals and improve gold recovery. Each module includes a short introductory video that is complemented by curriculum designed to be used during training workshops. The training modules were field tested in Abancay, Peru, in November 2015 and will be publically available via a web portal during the first quarter of 2016.
- USEPA has begun working with the US Department of Energy's Argonne National Laboratory, with the initial task under the agreement to research the use of mercury control technologies in gold shops, with the goal of providing objective information on their adoption, implementation and effectiveness. The agreement will enable Argonne National Laboratory to assist EPA in several areas. These include providing technical support in conducting activities including data collection,

inventory development, source characterization, risk management and developing best practices for emissions and use reductions. This support will help to diminish the environmental and health impacts of ASGM and other mercury sources globally and domestically.

- A need of ASM Knowledge Hub (KH) was identified by SAM based on Mongolia's demand to learn from international ASM best practices while sharing its ASM experiences with others. To define need, demand and concept of the KH, SAM organized national and international ASM KH symposiums amongst its stakeholders in May-June, 2015, in Mongolia, and a recommendation elaborating feedbacks of the symposium participants on the establishment of the KH was developed in August, 2015. Additionally, numerous collaboration interests and interaction touch-points between national and international stakeholders through the KH were identified during the international symposium. In order to follow-up and formalize these interests, SAM is communicating with each stakeholder with support from Skat Consulting, Swiss company specialized in network and knowledge management. SAM is expecting to organize an international stakeholders' meeting in first quarter of 2016 to validate shared purposes and core values of the KH with its key stakeholders and partners.
- Danish NGO Dialogos is working on the Philippines with Bantox since 2011 to promote mercury free gold mining using the gravity-borax method. This project is funded by Danida. The scope of this project is as described by the GEF funded project already included in the document.

Dialogos is working in Bolivia with Plagbol Foundation and Blacksmith Institute to promote mercury free gold mining using the gravity-borax method. This project is funded by the EU and Danida. It terminated in 2015, but efforts are done to continue from 2016.

Priority Action 3: Exploring innovative market-based approaches

- As mentioned under Priority 2, a project, funded by the GEF/ FFEM and implemented by UNIDO, to reduce the use and the harmful impact of mercury on human health and the environment in the artisanal gold mining communities in Burkina Faso, Mali and Senegal will wrap up in August 2016. Among the operational goals for this project was the goal to promote and where feasible, bring the pilot sites in each country to certification (Fairmined). The production of mercury-free gold is ongoing and reaching international markets through a complete transparent supply chain.

d) Planned future activities include:

Overall Global Mercury Partnership discussions during 2014-2015 (e.g. the PAG meetings and mid-year meeting in Korea) have pointed to the need for the Partnership to orient activities toward supporting the implementation of the Minamata Convention. As such, several partners have been oriented toward providing ongoing support for National Action Plans, which are the key required policy mechanisms for implementing

the Minamata provisions related to ASGM. We expect this to accelerate during the next reporting period.

In addition, our Partners reported the following plans for specific activities in the coming reporting period:

- UNIDO, in cooperation with WWF, is preparing a full-sized project entitled *Responsible Gold: Building a More Sustainable Future in the Peruvian Amazon* to mitigate the impacts of alluvial gold mining on the environmental quality and ecosystem services in the Peruvian Amazon forests, taking actions to reduce mercury use and improve the management of the activity, in order to reduce the negative impacts of ASGM in the Madre de Dios and Cuzco regions. The project will work to improve artisanal and small-scale mining practices, support the formalization of the mining sector, promote the development of market incentives for responsible gold, and raise the awareness of buyers within key supply chains that will stimulate demand for sustainable Peruvian gold.
- In 2016, the Pollution Control Association of Liberia (POCAL) plans to start documenting ASGM activities in Liberia, to find out the frequency/ intensity of mercury use in these activities. They plan to implement a project on promoting public awareness and education of the hazards of mercury use in the ASGM area, and making an assessment of mercury use and health effects of use in the ASGM areas in Liberia, pending financing.
- The Mineral Resources Authority (MRA) of PNG is currently working on submitting a Concept Note to APEC to fund mercury research in four regions of the country, to conduct an in-depth research into mercury use and disposal in the ASSM sector and environmental sustainability. They are also involved in an upcoming World Bank-funded project on Economic and Social Empowerment of Women in Small Scale Mining in the country. The project will hopefully be rolled out starting 2016.

2) Mercury cell chlor-alkali production

- a) The United States of America is acting as lead in this partnership area.
- b) The objectives of the partnership area are:
 - Prevent the construction of new mercury-cell chlor-alkali production facilities
 - Reduce mercury emissions and use from existing mercury-cell facilities
 - Encourage conversion to non-mercury processes
 - Reduce or eliminate mercury releases from waste generated by chlor-alkali production facilities including waste from conversion to non-mercury processes
 - 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.
- c) Key activities in this area include:

- The World Chlorine Council provided an updated inventory of C-A facilities. Available [here](#) on the UNEP web site.
- The Partnership believes that the 50% reduction in mercury demand by 2015 has been achieved (see updated business plan).
- The C-A partnership participated in a Partnership Area Leads meeting held in conjunction with the 2015 ICGMP in Jeju, Korea.
- C-A Partnership has opened dialogue with the Supply and Storage Partnership area about possible joint approaches to addressing the management of mercury stocks from decommissioned or converted C-A facilities.
- Country needs discussed by partners in teleconference

d) Planned future activities include:

- Greater integration of the C-A Partnership area with other PAs, in particular the Supply and Storage and Fate and Transport.
- Securing the long-term investments needed to assist with conversion and decommissioning
- Sharing information on options and potential approaches for permanent storage/disposal.
- Outreach to non-WCC member facilities.

3) Mercury air transport and fate research

- a) The CNR- Institute of Atmospheric Pollution Research, Italy and the Biodiversity Research Institute, USA are co-leading this partnership area.
- b) The objectives of the partnership area are:
- Accelerate 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-global air transport/transformation emission sources, transboundary movement through hydrological and atmospheric pathways, air/water exchange, aquatic mercury cycle and exposure in biota, particularly fish);
 - Enhance the development of scientific information on aquatic transport and fate of methylmercury to biota as well as human exposure, which was recently included amongst the objectives of the Partnership's research activities
 - Enhance compilation and sharing of such information among scientists, between scientists and policymakers and with various global stakeholders and other interested parties;
 - Provide technical assistance and training, where possible, to support the development of critical information;

- Enhance the development of a globally-coordinated mercury observation system to monitor the concentrations of mercury species into the air and water ecosystems in cooperation with the GEO Task HE-02 Tracking Pollutants: as part of GEOSS 2012-2015 work plan.
 - Enhance the exchange of information and cooperation with the Task Force on Hemispheric Transport of Air Pollutants (TF HTAP) of the UNECE-LRTAP Convention as well as with relevant International Organizations and Programmes.
 - Coordinate monitoring, assessing, and reporting information that can be used as the basis for assessing the environmental and public health benefits and effectiveness of global mercury reductions pursuant to the Minamata Convention on Mercury and other relevant mercury reductions strategies.
- c) Key activities in this area include:
- The leader of the F&T, in cooperation with partners and other research and university institutions in the world, has coordinated a 5-yr project “Global Mercury Observation System (GMOS)”, funded by the European Union's Seventh Programme for research, technological development and demonstration, which is aimed to build a global observing system of mercury contamination. GMOS started in November 2010 and ended in 2015. GMOS has established a strong cooperation with on-going regional programs in US, Canada, Japan and China as well as with international programs i.e., UNEP, UNECE-TF HTAP, GEO/GEOSS. The GMOS recent results are reported on the GMOS website www.gmos.eu . GMOS has provided multiple overarching contributions including:
 - Coordination in conducting research projects related to partnership objectives and scope on national/regional/global scales on **cross-cutting issues of the mercury cycle**.
 - Development of **global, coordinated network of measurements** for assessing levels of mercury and its species in the atmosphere and water – **improving the comparability among measurements** and observations.
 - Development of global, coordinated network for research on **source-receptor relationships** effort that would allow for the **creation of modeling framework** for understanding global fate of mercury.
 - Development of **global emissions and releases inventories**, e.g., by filling current gaps in geographic and source coverage which includes information on regions not yet accounted for and on sources not yet accounted for in currently used databases, e.g. biomass burning, artisanal gold mining, coal-bed fires and natural sources. F&T will give particular emphasis to the development of global emission inventories that will consider separately source by source in all industrial sectors.
 - **Built capacity**, including through the provision of training programs, related to partnership objectives and scope monitoring, modeling and other tools in countries where necessary.

- Developed a strategy to help Member Parties meet their monitoring, modeling, reporting and ultimately compliance needs. Our approach is based on an on-going North American model, proven over the past 15 years to meet the scientific and policy rigor expected. This strategy will generate a mercury database that links existing relevant data generating efforts for the world, a global mercury working group of expert scientists and policy-makers, and new scientific findings that are policy relevant that will be crucial for understanding spatial gradients and temporal trends. Ultimately a technical information document could be made available at CoP1 of the Minamata Convention on Mercury and serve as a possible basis for the Convention requirements with respect to effectiveness evaluation.
- Assessed fate of mercury in marine, freshwater, and terrestrial ecosystems from various sources including contaminated sites.
 - Presented the use of BRI's Global Biotic Mercury Synthesis (GBMS) database as a pilot project for uploading to UNEP Live at a science-policy workshops in Brussels, Belgium. This project is funded by UNEP-STAP-GEF and is in partnership with F&T member, the Society of Environmental Toxicology and Chemistry (SETAC). This funding is also being used to further expand and update GBMS, as well as to improve connecting scientific information to communities (led by SETAC).
 - Initiated a partnership with UNEP, IPEN, and BRI to conduct a global sampling effort of human hair for 30 or more countries (with an emphasis on Asia and the South Pacific). BRI will coordinate and analyze the samples. Fish samples will be collected when feasible.
- Improved linkages among existing international scientific efforts (e.g., GEOSS, the Arctic Council, UNECE-HTAP, WMO, and AMAP) with policy making process to be pursued through different channels of capacity building and transfer of knowledge (conferences, ad-hoc science-policy meetings).

d) Planned future activities include:

- Further Development of global, coordinated network of measurements for assessing levels of mercury and its species in the atmosphere and water – improving the comparability among measurements and observations for possible support to the future implementation of the Minamata Convention. In the framework of the Group on Earth Observations (GEO) flagship on "Tracking Pollutants" (on Mercury and Persistent Organic Pollutants - PoPs), GMOS expertise will continue its efforts within the Global Monitoring Plan in cooperation with UNEP. Therefore GMOS will continue its activity in the framework of the GEO 2016-2025 Work Programme and will support UNEP and interested Parties toward the Minamata Convention implementation process.
- The proposed strategy for developing a Technical Information Document is planned to be presented as a INF Document at INC7 of the Minamata Convention. As part of the Convention, an integrated effort that produces high quality data to formally

evaluate the effectiveness of the Convention is needed within six years after going into force. The Partnership Area proposes a strategy to help Parties meet their monitoring, modeling, reporting and compliance needs. This approach is based on an on-going North American model, proven over the past 15 years to meet high scientific and policy standards. Such rigor is expected for a globally-important environmental pollutant with potential significant ecological and human health implications. This strategy will generate a: (1) Mercury Database that links existing relevant data generating efforts for the world (through UNEP Live); (2) Global Mercury Working Group of expert scientists and policy-makers (a potential committee of the F&T Partnership), and (3) New Body of Scientific Findings that are policy relevant that will be crucial for developing environmental baselines and for understanding spatial gradients and temporal trends (crucial for how best to allocate funding and other resources). These three elements would ultimately create a Technical Information Document that would be made available at COP1 (or soon thereafter) and could inform Parties with respect to effectiveness evaluation.

- To help link our strategy with real world needs, a parallel pilot field and lab training effort will establish biomonitoring opportunities in parts of Latin America and eastern Asia, and potentially other regions. By building such monitoring hubs (alongside existing air mercury monitoring networks, such as the Global Mercury Observation System and the Pacific Mercury Monitoring Network), local field and analytical capacity will be enhanced through training and participation. We will leverage existing efforts and expertise from the F&T Partnership and use information from country-specific Minamata Initial Assessments.

4) Mercury-containing products

- a) The United States of America is acting as lead in this partnership area.
- b) The objective of the partnership area 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).

The Products Partnership's primary objectives remain unchanged; however, with the successful negotiation of the Minamata Convention on Mercury, it may be necessary to reconsider the role of the partnership to focus more on providing technical assistance related to implementing the convention. Currently the Products Partnership area is working to streamline the Business Plan to, among other things, emphasize outreach and the exchange on information/technical assistance to foster reduction of the use of mercury in various product categories. In turn, the Products Partnership can refocus to more effectively respond to the needs of its members and

contribute to a clearinghouse of information to assist countries to implement the Minamata Convention

c) Key activities in this area include:

- Products and waste projects in Burkina Faso and Madagascar:

Norway Overseas Development Assistance (ODA) supported a project in Madagascar and Burkina Faso entitled “Replacing Mercury-added Products and Promoting Improved Management of Mercury-added Product Waste” . The project in Madagascar was completed in March 2015 and resulted in a) an inventory of key products containing mercury, the current practice of the disposal of waste containing mercury, available alternative products and marketing of these products; b) A study on the control of imports of mercury-containing products and the socio-economic feasibility of the use of mercury-free alternative products. The study assisted the Government to control the import of these products and made recommendations to reduce their use such as promoting the purchase of mercury-free products; c) development of awareness raising and training tools on environmentally sound management of mercury waste d) increased awareness and interest of regional authorities about the Minamata Convention on mercury e) Training on environmentally sound management of mercury-containing waste carried out in three regions of Madagascar. Most importantly, the project catalyzed action towards the ratification of the Minamata Convention on Mercury. Madagascar deposited its instrument of ratification in May 2015 making it the 12th country to have ratified the Convention.

The inception workshop of a similar project in Burkina Faso took place in Ouagadougou last April 2015 with 40 participants representing 10 government agencies and civil society, high level officials of the Ministry of Environment . The workshop resulted in an action plan for project implementation. The project is currently being implemented but is delayed due to the political situation in Burkina Faso. The project is expected to be completed in December 2016.

- East Africa Dental Amalgam Phase-Down (EADAP) project in Kenya, Tanzania and Uganda:

Norway ODA also supported Phase 1 of the East Africa Dental Amalgam Phase down project with the following results a) A total of 196 dental personnel benefitted from capacity building and training activities following a training of trainers hosted by the World Dental Federation (FDI). Training topics included hazards of mercury, oral health promotion and clinical preventive dentistry, promotion of alternatives, and environmentally sound management (ESM) of waste. b) Three dental amalgam separators were provided to each country by the IDM and the DRNA. These were installed by trained local technicians at participating dental clinics (government, private, and a University/teaching institution) c) Awareness raising materials were developed by WHO and UNEP and translated to Swahili d) National trade and waste surveys showed that most of dental restoration materials are imported but exact importation data are not available. Dental amalgam is supplied both in liquid

(elemental) and encapsulated form. Alternatives to dental amalgam are available but some dentists still demand dental amalgam. Suppliers identified were from China, US, Australia, Turkey, Iran, Germany and India; e) Surveys showed that dentists are well aware of the risks of dental amalgam and that around 80 % of those dentists interviewed are already using alternatives, in particular composites and glass ionomers, however 50 -80% of the 90 dentists surveyed still use dental amalgam; f) National hazardous waste legislations are in place but enforcement is lacking; Only 40% of the 95 dentists surveyed practice waste segregation at the dental clinic; g) Kenya and Uganda have hazardous waste treatment facility that could serve as temporary storage for dental amalgam and other mercury waste; however, Tanzania has no single facility and is currently mixing its hazardous waste with general waste. Tanzania has a proposal for a sanitary landfill for the ESM of hazardous waste

Drawing on lessons learned and the success of EADAP 1, Norway ODA is currently supporting EADAP II. This project will expand to other dental care facilities with activities similar to phase I, ie, oral health promotion and environmentally sound management of dental waste that will entail awareness raising and training of dental personnel. The added value of Phase II is quantification of mercury that will be taken out of the environment through ESM of dental waste, engaging local waste management companies for project sustainability, and training of dental students on the use of alternatives to dental amalgam.

- Brochure on “Promoting the Phase Down of Dental Amalgam in Developing Countries”:

This brochure summarizes the measures to phase down dental amalgam in a developing country setting by reflecting the activities in EADAP phase I. A similar brochure is underway, but will highlight best practices of dental amalgam phase down in developed countries. The brochure will be available in March 2016.

- d) Planned future activities include:

After discussion of several ways to modify operations, the Products Partnership is focused on retooling to effectively support Implementation of Minamata Convention, most likely via providing technical assistance and reporting/outreach in support. While the core goals and objectives will remain in place (e.g., encourage the development and substitution of mercury-free products, incorporate the lifecycle approach to manufacturing, use, and disposal/storage of mercury-containing products), the Products Partnership plans to emphasize the collection and dissemination of information to its members and all parties seeking to reduce the use of mercury in products. Key topics for consideration include understanding the changing dynamics for the global marketplace for mercury in products and identifying pressure points for eliminating the use of mercury in products. After revisions, the Products Partnership business plan will be circulated for comment in late January 2016. If possible, the Products Partnership lead will provide an update on comments and concerns at PAG7.

5) Mercury releases from coal combustion

- a) The International Energy Agency (IEA) Clean Coal Centre is acting as lead in this partnership area.
- b) 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.
- c) Key activities in this area include:
 - A document summarising the potential bridging between the Minamata and UNFCCC conventions has been completed and uploaded as a free download document from the website
 - Project documents have been published from activities in Russia, S Africa, China, and India
 - The IEA CCC has produced a document summarising the market for mercury technologies under different international legislation and the document has been provided as a free download
 - Hg emission inventory report for SE Asia has been produced and made available
 - The annual MEC workshop was held in Chennai, India, along with a 1 day workshop on energy efficiency. The meeting went exceptionally well, gaining many new partners and opening discussion for several potential demonstration projects
 - Technical expertise has been provided to the BAT/BEP production group
 - Papers have been presented in - Beijing, Chennai, Jeju, and Krakow
 - Vietnam emission measurements have been made, a toolkit has been provided and a demonstration project is being discussed
- d) Planned future activities include:
 - The interactive electronic decision tree Process Optimization Guidance (iPOG) and its manual is to be updated, as requested by users
 - Continue to provide expertise to BAT/BEP preparation group and to the INC and COP negotiations
 - The location and date of MEC12 have yet to be determined

6) Mercury waste management

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

c) Key activities in this area include:

- Supported UNEP to develop ‘Practical Sourcebook on Mercury Waste Storage and Disposal’. The Sourcebook was launched at ICCM4 Side-event (2 October 2015). The Sourcebook is an informative tool that aims to enhance the capacity of Governments and other relevant stakeholders to ensure the environmentally sound storage and disposal of the major types of mercury wastes.
- Currently updating ‘Good Practice for Management of Mercury Releases from Waste’ (Good Practice Document).
- The updated technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with mercury was adopted by COP12 of the Basel Convention (May 2015)
- Professor Masaru Tanaka (Area Lead) participated in the International Conference on Waste Management 2015 hosted by UNEP-IETC as a resource person. Mr. Tanaka introduced some of the activities conducted by Waste Management Area at the session ‘The GPWM (Global Partnership on Waste Management) Biennium Meeting 2015’.
- EDUCAF-Cameroon is working on a program called "Best Environmental Performance Schools Program (BEPS)" will empower students to make a difference in their schools and community as well as positively changing people’s mentality and the way they use their environment. Students across the country today use a huge number of mercury containing gadgets and tools without any knowledge of the existence of such dangerous poisonous substance, therefore the BEPS program would teach students how to handle mercury containing products and other mercury free methods. For a more effective program and for more student engagement, the program would be run in a form of partnership and closely supervised by EDUCAF. Types of wastes that would be addressed in the BEPS projects: (1) Multiple Types of Mercury Wastes; (2) Waste Products Containing Mercury (e.g. batteries, fluorescent lamps); (3) Healthcare Wastes (e.g. thermometers); (4) Promotion of awareness and education regarding mercury waste; (5) Best environmental policy, keeping schools clean; and (6) Waste reduction and recycling. Expected results are to generate a nationwide environmental consciousness among students and all the other stakeholders, companies, communities and villages. Through this program, thousands of students would develop leadership skills, understand the problems and challenges faced by the today’s world, it would also provoke critical thinking in these students, and they would then pursue their education with an apercu of what await them and the challenges that lies ahead. Global environmental headlines would no longer be a mystery to students as they will get use in discussing these issues throughout the year in the BEPS Program activities.
- Mercury waste storage and disposal in the Caribbean: Jamaica, Suriname, Trinidad and Tobago: Norway ODA is supporting a mercury waste project in 3 countries in

the Caribbean, executed by the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean (BCRC Caribbean). The inception workshop took place in August 2015 and is expected to be completed in December 2016. Expected project outputs are:

- An inventory of mercury waste streams
- A list of possible temporary storage locations in the country, an analysis of their use, and an inventory of current mercury and/or hazardous waste treatment facilities including waste management practices. The identified facility/ties could serve as interim storage facility for excess/surplus mercury coming from various sources, which could be treated either as commodity mercury or mercury waste.
- A review of regulatory framework, including national or regional policy on hazardous substances and waste management.
- Established or strengthened national interagency committee on mercury storage and disposal.
- An assessment of basic management options and technology status, including review of the national and regional context.
- A national action plan on the environmentally sound management of surplus mercury in the country.

d) Planned future activities include:

- Update/finalize the ‘Good Practice for Management of Mercury Releases from Waste’
- Dissemination and Promotion of Practical Sourcebook for awareness on mercury waste management.
- Developing a worldwide campaign for mercury and mercury waste management awareness

7) Mercury supply and storage

a) The governments of Spain and Uruguay are jointly leading the supply and storage partnership area.

b) The objective of the mercury S&S partnership area is :

to reduce mercury supply considering a hierarchy of sources, and support the retirement of mercury from the market to environmentally sound storage.

c) Key activities in this area include:

- Workshop organized in the margins of the UNITAR_URGUAY Ratification and early implementation of Minamata Convention, 21st and 22nd of October 2014, Two Spanish expert presented different stabilizations technics for mercury wastes.
- Mercury stabilization pilot project of different mercury wastes from a chlor alkali plant in Uruguay. The complete report of the project will be available by the end of December.

- Participation in the BRS mercury sub-regional workshop held in Montevideo from the 17th to 20th of November 2015, presenting on the partnership area of supply and storage.
- Spain is drawing from its own funding, a small global study on mercury supply, trade and other relevant mercury activities. The study will be finalized by January 2016 and it will be sent to the Secretariat and the partners.
- Workshop: “Training on mercury management and remediation of contaminated sites”, for the Mediterranean countries, Almadén (Spain), 18-19 November 2015. organized by the EU program horizon 2020 and UNEP MEDPOL with the collaboration of the Spanish Centers SCPRAC and CTNDM and the Ministry of Environment.

d) Planned future activities include:

- Collaboration with a regional and national projects on mercury, regarding storage recommendation for mercury waste
- Collaboration in projects together with other Partnership Areas

8) Mercury releases from cement industry

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

b) 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.

c) Key activities in this area include:

- Developed a reference document to instruct cement plant operators on methods to measure, manage, and reduce mercury emissions from their kiln systems. The document includes practical guidance on methods for measuring emissions, analyzing materials, and experience with various abatement technologies. The document also instructs operators on areas of risk to be aware in order to help them more effectively reduce and manage mercury emissions. The reference document was distributed to stakeholders for comment. Comments were received from around the world from plants, cement associations, regulators, and NGOs. The stakeholder comments are now being incorporated into the reference document.

d) Planned future activities include:

- Finalize the reference document for reducing and managing emissions incorporating all stakeholder comments
- A scoping exercise to establish a database of cement plant emissions was performed in Q4 of 2015
- Finalize the conclusions of this scoping exercise and begin work in establishing the database if it is found feasible.
- Develop and implement a communication plan to distribute and encourage cement plant operators to use the developed reference manual.