



**Global Mercury Partnership
Partnership Advisory Group
Fourth meeting**
Rome, 27-28 September 2012

Reporting of the mercury emissions from Artisanal and Small Scale Gold Mining partnership area

UNEP Global Mercury Partnership

Note by the Secretariat

Individual partnership area evaluations have been prepared by the partnership areas in response to Annex I Section 3.f.iv of the UNEP Global Mercury Partnership Overarching Framework. The mercury releases from products partnership area has drafted a partnership area evaluation. It is available in the annex to this document for information.

4.0 Proposed Reporting Format for individual partnership areas

1. GENERAL INFORMATION	
1.1 Individual partnership area:	Artisanal and Small Scale Gold Mining
1.2 Individual partnership area lead:	Ludovic Bernaudat and Susan Keane
1.3 Reporting year/period:	July 2010 through May 2012
1.4 How many meetings were held over the reporting period?	Number of face to face meetings: 5 (2 PAG meetings; Global Forum; Tanzania World Bank meeting; Indonesia ASGM forum meeting) Number of teleconferences: One Other:
1.5 How many partners are parts of this partnership area?	43
1.6 How much funding was raised through this partnership area? What about in-kind assistance?	GEF program: about \$3.4M to date for Francophone West Africa and Ecuador/Peru); SAICM funding for Mali and Côte d'Ivoire (\$220,00 each). Bilateral funds: USEPA funding to Indonesia \$125,000; USEPA funding for Anglophone West Africa meeting 85,000 USD. Approximately 400,000 USD in support from Norway Overseas Development Aid in 2011-2012. UNEP program funds (government of Norway): Global Forum cost approximately 200,000 USD.
1.7 What is the objective of the individual partnership area?	
<p>The objective of this partnership is continued minimization and elimination of mercury uses and releases in artisanal and small scale gold mining. The Partnership aims to complement and supplement existing programmes in key, strategically selected ways that ensure that mercury reductions on the ground are globally significant. The Partnership will meet its objectives by:</p> <ol style="list-style-type: none"> Providing assistance to developing countries and countries with economic in transition to formalize / regulate the ASGM sector and work with governments to address financial, policy and regulatory options which can improve the ability of mining communities to achieve significant reduction of mercury use and emissions. Providing economic, technical, and educational information / guidance to miners and mining communities. Working within supply chains and use other market approaches to promote environmentally sound gold products. <p>Target: The Partnership promotes an aspirational target of a 50 percent reduction in mercury demand in ASGM by the year 2017. To achieve this, the Partnership seeks to eliminate the practice of whole ore amalgamation, open burning of amalgam and use of cyanide after mercury. Additionally, the Partnership will work to promote other changes in ASGM mining and processing techniques to achieve measurable reductions in mercury releases and promote increased gold yield.</p>	
2. MONITORING PERFORMANCE (tracking partnership activities and partner contributions)	
2.1 Please provide a short overview of key partnership area efforts completed since the previous Governing Council (brief description, outcomes, costs, timeframe).	
<p>Technical Guidance Documents: UNEP funded the preparation of a technical document that describes available, field-tested methods for reducing, and in some cases eliminating, mercury use in ASGM. The purpose of the document is to provide examples of existing technologies that can reduce mercury use in ASM communities immediately, and models for moving to zero mercury in the long term.</p> <p>Formalization Document: UNEP also developed an ASGM Formalization Guidance Document based that</p>	

provides case studies of formalization and legalization in this sector. The creation of this guidance acknowledges that if progress is to be made on reducing harm from mercury use in this sector, social/ legal factors must be understood and considered when designing policies to reduce mercury use.

Subregional workshop for Anglophone West Africa on mercury use in ASGM: Similar to the Francophone West Africa Strategic Planning Project, US EPA supported an Anglophone West Africa Strategic Planning Project. The workshop was intended to catalyze national action plans, based on data and information collected on the ASGM situation in participating countries, and on stakeholder outreach. The workshop took place in June 2011.

Global Forum. From 7-9 December 2010, the Global Mercury Partnership hosted a Global Forum on ASGM. The meeting brought together approximately 100 delegates representing 17 governments, NGOs and mining communities from many of the important ASGM regions. The meeting provided a venue for concrete dialogue on ASGM and in raising awareness among the participants.

In September 2010, the Partnership hosted an afternoon **meeting on social and financial issues associated with ASGM.** The meeting was intended for members of the international community, private sector and other stakeholders located in Geneva, to encourage them to become more engaged in the ASGM issue. The meeting examined, among other issues, the role of the markets and other economic incentives in creating change in the ASGM sector.

In collaboration with the World Bank, the Partnership held a meeting on **Approaches to Reduce the Use of Mercury in Artisanal and Small Scale Gold Mining in Dar Es Salaam, Tanzania** on October 15, 2010. The purpose of the workshop was to gather a cross sector of organizations involved in the ASGM sector in Tanzania (the Tanzanian government, the World Bank, local and international NGOs and the private sector) to share their experiences and plans for work, with emphasis on activities to reduce mercury pollution. Through this dialogue, the partnership identified areas of potential collaboration and developed recommendations for potential cooperation.

UNEP has prepared a **guidance document on the formulation of national strategic action plans** for the ASGM sector. This guidance was prepared particularly for countries participating in the regional strategic action plan projects in South East Asia and Latin America but is broadly applicable to any country who wishes to create such a plan.

UNEP DTIE Chemicals Branch conducted a **desktop study to explore the potential environment and development co-benefits from elimination, reduction and safer use of mercury** in ASGM, in close collaboration with members of the Global Mercury Partnership and other stakeholders.

UNEP also developed an **options document** that details different approaches **for financing** the mercury transition in artisanal and small scale gold mining based on existing models.

AGENDA, with funding from The Artisanal Gold Council (AGC) and the European Environmental Bureau (EEB), conducted a project Tanzania **to reduce mercury emissions in two small scale gold mining communities in Tanzania.** Following an in depth assessment exercise performed by AGENDA, the project installed mercury vapor condensers into gold shops. The condensers capture mercury vapor that would otherwise be released directly to the environment during the burning of amalgam. **ASGM Asia Regional Strategic Planning Project.** With the SAICM Quick Start Program funding, and with the assistance and advice of Partnership members, the governments of the Philippines and Cambodia participated in a regional strategic action planning project. Both countries prepared national plans as part of this process. The Philippines prepared an ASGM National Strategic Action Plan that commits specific agencies to specific actions. The Department of Environment played a key role in bringing the various government agencies and stakeholders to the table; importantly the plan is also based on substantial consultation with miners and mining communities. Cambodia created a National Strategic Action Plan, but is still in the process of updating this plan with additional consultations. These plans were presented at the project conclusion workshop in March 2011, where several other countries from the Asia region were in attendance: China, Indonesia, Malaysia, Mongolia, Viet Nam, and Laos. The presence of these countries allowed the participants to identify additional opportunities for regional cooperation among the countries on ASGM.

UNIDO, with the financial support from the Government of Finland, and as an outcome of the Francophone

Africa meeting held in December 2009, assisted the governments of Burkina Faso, Côte d'Ivoire, Guinea, Mali, Niger and Senegal to develop a draft National Strategic Action Plans.

A workshop on sustainable ASGM practices was held by BALIFOKUS and IRC Medmind, with support from several Partners. The Sustainable ASGM Workshop was conducted as a separate part of the international conference on environmental, socio-economic, and health impacts of Artisanal and Small-scale Mining Conference conducted in Malang in Feb 7-8, 2012. The ASGM Workshop in Mataram was the first ASGM gathering which participated by 60 participants representing various stakeholders from 7 countries, 5 provinces, 12 local governments, 6 universities, 3 international/regional NGOs, 3 national NGOs and 3 local NGOs, representative or miners and community leaders as well as private sector representatives. The workshop identified the snapshots of problems from 5 sub-regions (Sumatera, Java, Kalimantan, Sulawesi, and West Nusa Tenggara) through the sub-regional panel presentations with special focus on West Nusa Tenggara Province. The workshop also shared non-mercury techniques practiced in other countries, mercury reduction technique and phytoremediation options for mercury contaminated sites. A field trip which was conducted on the following day provided the participants with the real situation on the ground and a practical/technical demo session at the village hall attended by the local miners and local communities in one of ASGM hotspots in West Lombok Regency at Pelangan Village.

2.2 Please provide a short overview of the key current partnership area efforts (brief description, expected outcomes, budget, timeframe).

A GEF Medium Size Project has been developed for Francophone West Africa (Burkina Faso, Mali and Senegal). The project aims at finalizing the National Action Plans initiated earlier in these countries, transferring technologies that eliminate mercury emissions from the sector and introducing the Fairtrade / Fairmined standard in a selected numbers of sites in the three participating countries. The project is implemented by UNIDO with strong involvement of other partners. The co-financing has been secured through contribution of the French GEF, participating Governments and partner projects listed below.

A GEF Medium Size Project has been developed for Ecuador and Peru. The project aims at demonstrating and replicating mercury emission reduction methods and non-mercury gold extraction for the artisanal and small-scale gold mining sectors of the participating countries, based on local solutions. The project is implemented by UNIDO with strong involvement of other partners. The co-financing has been secured through contribution of the participating Governments and partner projects listed below.

Reducing Mercury Use and Release in Andean Artisanal and Small-Scale Gold Mining The US State Department is funding a project on Reducing Mercury Use and Release in Andean Artisanal and Small-Scale Gold Mining that includes: 1. evaluation of mercury levels in the air in Piura mining operations 2 education and training of 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 Meetings to establish the International Training Center of Artisanal Miners (ITCAM). A Business Plan to establish an ITCAM in Portovelo, Ecuador has been elaborated and 5 Establishment of a design, equipment list and feasibility study for small processing plants for the Piura Department. This will be presented to the Government of Piura in February 2012.

Demonstration Projects in Peru and Francophone West Africa. The US State Department is funding one project in Francophone West Africa and one in Peru 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. Both of these projects were developed in consultation with the Partnership and both involve Partners as implementers and contribute to the co-financing of the above-mentioned GEF projects

Through UNIDO, SAICM has provided funding to Mali and Côte d'Ivoire in two projects aiming at establishing an inventory of the extent of the sector in the countries as well as finalizing their National Action Plan. The Mali project forms part of the co-financing of the GEF project for the sub-region. Both projects are

being implemented with the active participation of the partners.

Indonesia Training and Technology Transfer on Mercury Use in Artisanal and Small Scale Gold Mining.

The project is being undertaken in collaboration with the partnership through the Blacksmith Institute and a local NGO, building on the success of the previous and existing project work in Indonesia through UNIDO and local partners and funded by the USEPA. Project objectives include: to support the development and delivery of a national strategic planning workshop in Indonesia to encourage the development of a strategic action plan to reduce mercury use and emissions ASGM as well as to support and expand successful NGO efforts on training and technology transfer to key ASGM communities. The project will consist of three components: (i) baseline data gathering, (ii) multi-stakeholder workshop, (iii) implementation of demonstration project and technology transfer activities. A working level meeting (appx 10 people) to develop an action plan on ASGM. Topics will include: 1) the inventory of the problem (what data has been acquired); 2) what steps will be followed to develop a national action plan (including a timeline and delegation of responsibilities).

Ban Toxics together with the Danish NGO, Dialogos, and other partners have embarked on a multi-year, multi-pronged project to introduce mercury-free techniques utilizing miner-to-miner trainings. The project has partnered with local miners who do not use mercury, and created an avenue for them to reach out to other miners to convince and train to adopt mercury-free techniques. We have focused on local expertise that improve upon gravitational methods (e.g. use of sluice box and panning) and the use of Borax ($\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$) at the refining stage of the process. This method has been commonly called "Borax Method", which does not completely capture the whole process and intricacy of the work involved. The project was started in mid-2011 and has now reached its 1 year mark. The project is focusing on 2 ASGM areas: Balbalan, Kalinga an indigenous community, and the Camarines Norte region of the Philippines. To date, good progress was made in convincing and motivating miners to move away from mercury. At least 500 miners in the project areas have been trained, and the project is now beginning to monitor the amount of mercury reduction induced by the project. The project was the focus of a Filipino show "Reporter's Notebook" and the recording can be seen on Ban toxics' website (www.bantoxics.org).

2.3 Please provide a short overview of any key upcoming, planned partnership area efforts (brief description, expected outcomes, budget, timeframe).

A third GEF project is currently under preparation for the Philippines and Indonesia with strong involvement of our partners in the respective countries: Ban Toxic and Blacksmith Institute. The project will aim at multiplying the successes in mercury reduction achieved by the partners in the two countries.

Inventory work: A project will be initiated, supported by the Government of Norway, to enhance local capacity in Africa and Latin-America to implement ASGM mercury reduction activities and to engage local experience to adapt and improve mercury inventory tools facilitating more effective support to the ASGM sector. In this project, Existing tools for capacity building are adapted and tested for ASGM, in particular the mercury inventory toolkit. In addition, training partners will be identified to support local capacity building for ASGM and training capacity will be promoted.

The Geological Service of Denmark (GEUS) will be engaging in several ASGM related projects in the next year, including: an ASM-Fair in Dar es salaam (with the Ministry of Mines, Tanzania). This will include a ½ day workshop at the Fair and presentation of the direct smelting method; a Baseline Study of ASM in Mozambique funded by World bank; a project in Mozambique to test the direct smelting method in different geological environments and train some ASM. This project, funded by Danida, will include details chemical and metallurgic analysis in laboratories of samples from "source rock", "milling component" and " component washed out of the sludge". In 2013 a test of the direct smelting method in Ethiopia and training of artisanal miners will take place.

2.4 Identify the priority actions for the forthcoming reporting cycle (2 years).

As the partnership continues to build up its portfolio, areas of priority for the next reporting period will be the development and implementation of projects aiming at (i) obtaining a more accurate picture of the extent of the issue, (ii) assisting countries in the development of their Action Plan and (iii) continuing the dissemination of low/non mercury techniques. Also, the broadening of the donor base should be seen as a priority.

3. TRACKING PERFORMANCE RELATED TO UNEP GOVERNING COUNCIL PRIORITIES

3.1 In response to Governing Council Decision 25/5, paragraph 34/c: Please summarize the key results achieved to date by the partnership area in terms of the following areas (as applicable).

i) Providing information on best available techniques and best environmental practices and on the conversion of mercury-based processes to non-mercury based processes;

The Technical Guidance Document provides a comprehensible guide to Best Practices that can be used by policy makers, field program staff and miners. Further the design of the GEF projects, the State Department projects (in Peru and Francophone West Africa) and the EPA funded Indonesia project all have field training components to promote alternative practices.

ii) Enhancing development of national inventories on mercury;

Within the national and regional strategic planning projects, one of the tasks of each country is to gather national inventory data on mercury use in ASGM, using the guidance document developed by the UNEP. GEF projects also contain a revision or development of the national inventory.

The Artisanal Gold Council continues to maintain a website called “Mercury watch” which tracks the use of mercury in ASGM worldwide. It also provides documents and other resources related to ASGM, and also allows mapping various views of ASGM in relation to poverty or other socioeconomic indicators by country

iii) Raising public awareness and supporting risk communication;

The Partnership has sponsored the Tanzania WB meeting, the Global Forum and the ASGM workshop in Mataran all were aimed at awareness raising.

iv) Providing information on sound management of mercury;

Within the SAICM projects, sound mercury management will be addressed.

3.2 (a) Please specify whether the promotion of non-mercury technologies (where suitable economically feasible alternatives do not exist) is relevant to the partnership area. YES

(b) If it is relevant, how is the partnership area specifically addressing the promotion of non-mercury technologies? Several of the projects being carried out by the Partners work with enhanced gravity methods together with direct smelting and also small scale cyanide (where applicable). These are non-mercury methods.

4. ASSESSING EFFECTIVENESS

(measuring the impact of partnership activities on target beneficiaries)

4.1 What are the partnership area indicators of progress? If no indicators, please specify why.

- On a field project level, the Partnership will encourage implementing Partners to report measureable field project results, such as:
 - Number of miners (or other target recipients) trained.
 - Production of awareness raising materials/ training materials.
 - Successful completion of demonstration of alternative technology.
 - Where possible, typical number of kilograms of gold produced by ASM for one kilogram of mercury used and/or typical emissions reductions achieved.
 - Typical amount of mercury purchased, used and traded by ASG miners before and after intervention.
 - Availability of environmental quality data in relevant areas.
- For broader policy-level activities, results indicators could include updates on:
 - Number of partners or member countries involved in the Partnership.
 - Numbers of projects/studies conducted by the individual partnership members, with clear indications of how the Partnership supported or facilitated the work, or if the work is independent activity that aligns with Partnership goals.
 - Number of developing countries involved/assisted.

<ul style="list-style-type: none"> • Status of data gathering in assisted countries. • Delivery of tools and models on national strategies, formalization, technologies and other products that will assist governments and others to promote mercury reductions in ASGM. • Successful use of these tools by the intended audience. • New opportunities or initiatives that could benefit from Partnership support.
<p>4.2 Please report on progress in terms of each of the partnership area indicators outlined within the partnership area business plan.</p> <p>The Partnership has been successful on policy-level goals of assisting with strategic planning, and with providing technical guidance materials. We have also consistently attracted more partners. However, quantitative metrics for outcomes from field projects still remain to be measured, since these projects are still underway or just beginning.</p>
<p>4.3 What are the strengths of the partnership area?</p> <p>The strength of this partnership area comes from the diversity of the partners (intergovernmental organizations, NGOs, representative of the private sector, government, academics) who all bring about their particular experiences, expertise and solutions. There is potential here to be highly productive, collaborative and successful. The increased number of joint activities this reporting period attests to that potential</p>
<p>4.4 What are the weaknesses and/or major challenges for this the partnership area?</p> <ol style="list-style-type: none"> Fund raising is the most significant challenge. The most urgent need is for on-the ground field projects that demonstrate immediate reductions but also provide models for global reductions. Dissemination of information is critical to expanding ASGM activities worldwide. The involvement of large scale mining in the partnership area is a challenge. Linking of large scale initiatives with ASGM standards is an important element to consider
<p>4.5 Can the weaknesses or major challenges be addressed through the partnership? If yes, what is the best strategy to address such weaknesses / major challenges in moving forward?</p> <p>The partnership can be helpful in increasing collaboration and identifying opportunities for fund raising. Further, both donor and beneficiary countries can be encouraged to join the partnership and increase active participation. Regarding dissemination, the creation of the technical and legalization/formalization documents will support better dissemination, as will sharing of information through the CASM webpage or other internet fora.</p>
<p>4.6 In view of above, how should the partnership area be modifying its approach in the coming two year cycle? Should the objective and indicators of the partnership area be revised in moving forward?</p> <p>As the Partnership identifies more projects and sources of funding, more frequent communication will be necessary to ensure that all partners have a chance to participate, benefit and add their inputs. More emphasis is also needed on sharing available information through web resources.</p>
<p>5. FUTURE COLLABORATION</p>
<p>5.1 Please identify whether there are potential areas of effort for the partnership that would benefit from enhanced collaboration within the overall UNEP Global Mercury Partnership.</p> <p>The Partnership should keep abreast of developments regarding trade and storage of mercury, as this affects the supply available to the ASGM sector. There is a direct link between ASGM and a mercury storage project funded by US State Department.</p>
<p>6. OTHER</p>
<p>6.1 Please outline how this report was drafted and who was consulted with in doing so.</p> <p>The report was drafted by the area co-leads (UNIDO and NRDC) with inputs received from several of the ASGM Partnership members regarding their past, current and future activities.</p>