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United Nations Environment Programme

Global Mercury Partnership Partnership Advisory Group First meeting Geneva, 31 March – 2 April 2009

2007-2008 - Reporting of the mercury in 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 in artisanal and small-scale gold mining partnership area has a drafted partnership area evaluation. It is available in the annex to this document for information.

#### Annex:

# 2007-2008 – Evaluation of the Mercury in artisanal and small scale gold mining partnership area

1. General information	
1.1 Individual partnership area:	Artisanal and Small-Scale Gold Mining
1.2 Individual partnership area	UNIDO
lead:	
1.3 Reporting year/period:	2007-2008
1.4 How many meetings were held	Number of face to face meetings: 3
over the reporting period?	Number of teleconferences: 10
	Other:
1.5 How many partners are part of	16 but Currently only 7 support letters, found at:
this partnership area?	www.chem.unep.ch/mercury/Sector-Specific-
	Information/Artisanal-small-scale-mining(2).htm
	A formal process of joining the partnership was established
	under the Overarching Framework. Partners are reminded to
	submit partnership support letters to UNEP. Information on
	joining the partnership can be found at:
	www.chem.unep.ch/mercury/partnerships/new_partnership.htm
1.6 How much funding was raised	- UNIDO provided Project Manager
through this partnership area?	- USEPA provided teleconference facility.
What about in-kind assistance?	- 500,000 USD from the SAICM Quick Start Programme
	for two regional ASGM projects.
	- UNEP provided \$15,000 to support a technical workshop
	on non-mercury and low mercury technologies for ASGM;
	other partners provided in-kind contributions by providing
	speakers for the workshop
	- partners are welcome to list others here

#### 1.7 What is the objective of the individual partnership area?

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 and that the improvement of mining practices is consistent with the United Nations Declaration on the Rights of Indigenous Peoples. The Partnership will meet its objectives by:

- a. Providing assistance to developing countries and countries with economic in transition to formalize / regulate the ASGM sector.
- b. working 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.
- c. providing economic, technical, and educational information / guidance to miners and mining communities.
- d. working within supply chains to promote environmentally sound gold products.

Target: The Partnership promotes a 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. Additionally, the Partnership will work to promote other changes in ASGM mining and processing techniques to achieve measurable reductions in mercury releases.

#### 2. MONITORING PERFORMANCE

(tracking partnership activities and partner contributions)

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

**SAICM project in Asia has recently commenced.** The focus countries are Cambodia and the Philippines. The project is being implemented through UNEP in collaboration with partners. Expected outcomes of the project:

- National Working Group is formed. National workplan prepared.
- Guidance on the development of a national strategic plan is developed.
- Multi-stakeholder national strategic plan for ASGM is developed for Cambodia and the Philippines.
- Regional collaboration and coordination is enhanced through exchange of experiences and lessons learned on a regional level. Awareness of governments and stakeholders is raised. A regional action plan will be developed within the region as a result of the regional conclusion workshop.
- Stakeholders identified. Coordination of national stakeholders as well as public participation in activities is improved.

**SAICM project in Latin America** has recently been approved. The model is based on the Asian project above. The focus countries for this project are Peru and Bolivia.

#### Association for Responsible Mining – Standard Zero

The standard zero of ARM proposes a process to support the miners organizations to minimise the use of mercury and cyanide over an agreed upon period of time, through implementation of responsible practices and technologies to mitigate impact on the environment and human health. ARM is working on field-testing the Standard Zero in four countries in Latin America: Bolivia (2 cooperatives in Cotapata), Colombia (Choco – 2 community councils, and Nariño – 2 cooperatives), Ecuador (Bella Rica), and Peru (Central Peru – 3 community miners companies). Both Nariño and Peru have important progress to show in mercury reduction. Choco does not use it at all. These are key showcases for dissemination, which can be reinforced through a miner` exchange program to induce horizontal learning.

#### **Small-scale Gold Processing Project:**

The United States, local governments in Brazil, UNIDO and UNEP have partnered to reduce mercury emissions from gold processing shops in the Amazon. The Partnership has verified baseline measurements in the Amazon, and developed options for locally-manufactured appropriate technology solutions for the capture of mercury vapours in the gold shops. A prototype technology was installed in 6 gold shops in 2 cities in the Brazilian Amazon and tested at over 80% efficiency of mercury vapour capture. The total estimated mercury reduction to date is 78.75kg.

The project is engaging other partners to disseminate the technology further in Brazil, and into other countries. A report of the Brazil technology demonstration is available online, including case study information and a manual for building and installing the technology. A site assessment for gold refining shop applications in the Peruvian Amazon was undertaken in May 2008, with a return visit and pilot mercury capture system installation anticipated in September 2008. An outreach workshop in Brazil occured in the September/October timeframe.

#### Senegal Improved Artisanal Mining Technology and Training Project:

Senegal has partnered with the United States, UNIDO, the Blacksmith Institute, and local NGOs to reduce the use, emissions, and health effects of widespread mercury use in the gold mining region of eastern Senegal, near Tambacounda. Beginning with a baseline assessment of mercury use by field miners, partners developed and implemented a plan to train community-based NGOs and health workers on appropriate technologies for mercury capture and reuse, and safe mercury management techniques. Over 800 miners have been trained in the use of hand-held retorts as a mercury collection device for use during gold amalgamation in the field. Over 250 miners have purchased retorts and about 94% report that they use these retorts consistently in the amalgamation process, with mercury release reduction to date of over

### 38.5kg.

To ensure buy-in and sustainability of cleaner technology approaches, USEPA is planning a meeting to be hosted by the Government of Senegal, in mid-September, 2008, where government officials, academics, and representatives from the artisanal gold mining community will develop and agree to promote a model strategy for the remaining 8,000 miners to ensure reduced mercury exposure.

Next steps include a regional approach to encourage neighboring mining countries to develop action plans for dramatic reductions in mercury use, emissions and exposure throughout the artisanal gold supply chain.

#### **Mongolia Mining Project:**

Mongolian NGO Sans Frontiers Progress (SFP) and PACT partnered with the United States on an awareness and education and training campaign about mercury use, harm reduction strategies, and alternative technologies including a non-mercury sluice in the South Gobi mining region. A data collection component assisted in assessing the national mercury picture. Key results include broad dissemination of public awareness materials, development and dissemination of guidance on mercury free extraction methods, completion of baseline data survey.

#### **Communities and Small-scale Mining (CASM):**

The Communities and Small-scale Mining (CASM) initiative was launched in 2001, in response to a critical need for integrated, multi-disciplinary solutions to the complex social and environmental challenges facing ASM communities, and improved coordination between those working in this sector.

CASM is a global networking and coordination facility with a stated mission to "to reduce poverty by improving the environmental, social and economic performance of artisanal and small-scale mining in developing countries." CASM is currently chaired by the UK's Department for International Development and is housed at the World Bank headquarters in Washington, D.C.

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

Partners: Please provide feedback in other feedback.

### Country Action Plan Workshop in Francophone Western Africa

The USEPA and UNIDO are currently working on organizing a awareness raising workshop for Francophone Western Africa. Decision makers and ASGM stakeholders of 5-6 countries will be invited to present the situation in their country and USEPA & UNIDO will provide information on the options available to them (based on successful examples) and the need to develop National Action Plans. Timetable: first Quarter of 2009. Budget USD 100,000. Outcomes: National Action Plans in these 5-6 countries.

#### **Empowering Artisanal Miners in Mozambique**

UNIDO is developing a proposal to implement the GMP II in Mozambique. Timetable: project developed and financed in 2009, 5 years implementation. Budget USD 2.7 milion. Outcome: Environment and public health preserved, alternative livelihood introduced, sustainable communities.

## 2.3 Please provide a short overview of key partnership area efforts completed since the previous Governing Council (brief description, outcomes, costs, timeframe).

## Communities and Artisanal & Small Scale Mining (CASM) pre-conference workshop

Held in Brasilia on 7 October 2008 with approximately 40 participants representing a cross-section of miners and mining associations, government officials, academics. Many partners contributed to this activity, coordinated by NRDC. UNEP contributed 15,000 USD to the workshop from the UNEP Mercury Trust Fund. The purpose of this workshop was to promote awareness and adoption of cleaner production techniques for ASGM operations in order to reduce the amount of associated mercury pollution. The workshop was organized into four main sections:

- 1. Overview: how and why mercury is used, and a review of techniques available to reduce or eliminate its use;
- 2. Non-mercury gold extraction techniques;
- 3. Mercury use reduction techniques for miners; and

4. Mercury recovery at gold shops.

The meeting report and presentations available at:

www.chem.unep.ch/mercury/Sector-Specific-Information/Artisanal-small-scale-mining(1).htm

#### **Global Mercury Project**

The UNIDO GMP has been focused on this important problem in six pilot countries for the past five years in UNIDO's GMP Phase I: Brazil, Sudan, Indonesia, Lao's People's Democratic Republic, Tanzania and Zimbabwe. Results have been a global awareness raising on the issue, legislation changes and the demonstration of cheap and easily implementable technical solutions

### **Suriname Training Project:**

University of Bremen, UNIDO, Suriname and UNEP have partnered to train small-scale gold miners in clean technology, training of personnel to quantify atmospheric mercury emissions and its impact on health. The project was funded (US\$ 39,000) through the UNEP Mercury Trust Fund.

#### 3. ASSESSING EFFECTIVENESS

(measuring the impact of partnership activities on target beneficiaries)

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

- Mercury purchased and used in the communities and target countries where technical activities are carried out (baseline is the 2005 data from the 2006 UNEP Trade Report).
- Mercury release reductions.
- Where available and where feasible, number of kilogram of gold produced by ASM for one kilogram of mercury used in the sector.

## 3.2 Please report on progress in terms of each of the partnership area indicators outlined within the partnership area business plan.

It is currently difficult to assess progress in terms of the above noted indicators, and the partnership area may need to reflect upon this in moving forward. There is limited baseline data for the first two bullets (first bullet for 2005 in the Trade report and second bullet for 2005 from the Emissions study that is currently being finalized). UNEP could consider commissioning a study to assess progress in these areas, including the collection of more solid and appropriate baseline data. The third indicator is also very difficult to assess – this might be considered in terms of a particular community or country but would not be practical in terms of a global indicator.

## 3.3 Please summarize the key results achieved to date by the partnership area in terms of the following areas (as applicable):

i) Sharing and exchanging information:

The partnership has proven a good tool for the exchange of information. Through regular teleconference and face-to-face meetings, information on various intervention in the sector has been widely circulated promoting replication, exchange of experience and expertise

ii) Strengthening capacity:

At this early stage, capacity building has been limited. However, countries actively participating to the meetings have gained in exposure.

iii) Other results you may wish to highlight:

The partnership has played a key role in bringing stakeholders together. The development of a number of current pipeline project would not have been possible otherwise.

#### 3.4 What are the strengths of the partnership area?

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 that has potential to be highly productive and successful.

### 3.5 What are the weaknesses and/or major challenges for this the partnership area?

- i. Fund raising is a major challenge
- ii. Directly engaging developing countries/mining communities in need of assistance.
- iii. Dissemination of information is an important role for the partnership area. Partners have indicated an interest in ensuring that the most effective and efficient strategies for information dissemination is explored amongst partners in moving forward.
- iv. 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.
- 3.6 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?
- The involvement of donor countries in the partnership should be a priority as most of the mercury used in ASGM is exported from the developed world.
- 3.7 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?

Current partners should discuss how best to attract the active participation of donor countries and developing countries.

3.8 Please specify whether the promotion of non-mercury technologies (where suitable economically feasible alternatives do not exist) is relevant to the partnership area, and if it is, how the partnership area is addressing this aspect.

The promotion of non-mercury (and low mercury) technologies is an important part of this partnership area and is the key to meeting the long term goal of protecting human health and the environment from mercury releases. The diversity of technical and socio-economic obstacles is an obstacle – while some operations could move to non-mercury technology rather easily, currently, it is very difficult for others to do so (in particular the cost of non-mercury technology is significant and/or other factors such as the nature of the ore). However, even where non-mercury technologies are impractical, low-mercury technologies can go a long way to reducing mercury emissions. For example, use of gravity concentration, rather than whole ore amalgamation, will significantly reduce, but not eliminate, the use of mercury.

The partnership area proposes building on the momentum of the workshop hosted on 7 October in Brasilia through the development of a best practices document aimed at helping miners to identify and apply effective mercury reduction strategies.

#### 3.9 Please outline how this report was drafted and who was consulted with in doing so?

Report was drafted by the current area lead (UNIDO) with the help of UNEP Chemicals. The report will finalized after circulation for comments and suggestions among the partners. Input will be received over the 17 November teleconference and through e.mail input (final deadline for input is 27 November).

4. This section is intended for other relevant comments.