

Meeting Summary

Partnership on Mercury Reductions in Artisanal and Small Scale Gold Mining (ASGM)

24 October 2007 (13.30 - 17.30 EST)
Washington, D.C., USA

1. Welcome

The World Bank's Communities and Small Scale Mining (CASM) group, Veronica Kohler, welcomed participants to the meeting.

The United Nations Industrial Development Organization (UNIDO), Eric Uram, welcomed participants and thanked CASM for organizing the logistics for the meeting. The list of participants is included in Annex 1.

2. Setting the Stage

Five short presentations were made that set the stage for the ASGM Partnership. The available presentations are attached in Annex II.

- CASM (Veronika Kohler) provided an overview of their programme and their strengths in working/communicating at the mining community level. She indicated CASM is interested in further participation in the partnership.
- The United Nations Environment Programme (UNEP) (Brenda Koekkoek) presented an update on the UNEP Global Mercury Programme, the on-going process of strengthening the overarching UNEP Global Mercury Partnership and the structure of the proposed business plan for the partnership areas.
- The United States (Marianne Bailey) provided context in the establishment of the ASGM Partnership and some of the on-going activities under the partnership. She highlighted that the lack of Secretariat support for the overarching partnership has been a challenge and that the UNEP Governing Council Decision 24/3 (from February 2007) is playing a role in strengthening and formalizing this aspect of the partnership. Much interest was expressed by participants in the Small Scale Gold Refining Shop Project in Brazil.

Action Item: Argonne laboratories to follow up with the report on the small scale gold refining project in Brazil. UNEP to post it on UNEP mercury web-site.

http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm

- UNIDO (Eric Uram) presented the Global Mercury Project (GMP) II Strategy in moving forward. One of the key elements in the UNIDO strategy is aiming deep. He explained the 3 tier approach in the GMP II strategy.

It was noted that the top three mercury source countries in ASGM include: China, Indonesia, Colombia. Limited government level support for activities in China and Indonesia make it very difficult to work in these countries (they are currently

identified as tier 3 and tier 2 countries respectively). Support is needed to bring the governments on board in these and the other level 2 and 3 countries. There is strong government support in Colombia, having pledged substantial cash contribution to UNIDO for GMP-2 activities there.

One of the main focuses of the UNIDO GMP is to promote the elimination of whole-ore amalgamation and to improve recovery of mercury in the field and in shops as key first steps in significantly reducing country demand for mercury.

- The Natural Resources Defense Council (NRDC) (Susan Keane) provided the NGO perspective on ASM, noting realities of the sector and potential strategies in moving forward. She noted that this sector is not just projects and money – the political will, the right players and the big picture are all very important.

The upcoming UNEP meeting of the Open Ended Working Group on Mercury (12-16 November 2007) was noted as one important opportunity to raise awareness and seek higher level political buy-in from governments. UNEP/UNIDO are hosting a lunch time session on the ASGM partnership at the meeting. Marcello Viega noted the need for clear direction for legislators to take action in this sector and that UNIDO had developed Guidelines on Mercury Management in ASGM. He further noted that mandating the elimination of mercury is not effective and promotes the creation of an illegal sector in the country.

Action Item: Marcello Viega to follow-up with the U.N. International Guidelines on Mercury Management in Artisanal and Small-Scale Gold Mining as a policy tool for governments. UNEP to post it on UNEP mercury web-site.

http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm

(Done 1 November 2007)

3. Discussion on PRELIMINARY ASGM Partnership Business Plan

Discussion on the business plan followed. All attempts have been made to incorporate the discussion and input received into the re-draft of the business plan.

Some general comments:

- Priority actions need to be clear and focused in order for the partnership to be successful. Need partner efforts and timelines directly linked with priority actions.
- Need indicators and need to monitor them.
- Shorter-term or medium term goals would be helpful – where will we be in 2 or 3 years? 50% target is great, but a strategic timeline is needed with strong financial commitments.
- Need more miners/mining country representation on the partnership.
- Rising demand for fair trade clean gold, this is the direction in which some of the market is moving. The Association for Responsible Mining is highly involved in this aspect and is interested in collaborating with the partnership, but ARM/fair trade is broader reaching than just mercury (for example: education is a big issue in many mining communities). Currently the demand is there for fair trade gold, and the problem is the development of supply (that is available and reliable).

- It is recognized that a global partnership also has some need to work on a broad, global level.
- The partner efforts also need to be established in a way that is strategic at the country level? The UNIDO tiers in GMP-2 is established; the question is how can we support/build the UNIDO tiers? Any priority countries/regions identified need to be on board as partners. First priority action could be development of some country specific strategies within the next 6 months. UNEP can help bringing together for such work.
- Information is important to base any strategy:
 - World Bank extractive industries review provides a great deal of information – asm section.
 - Need to figure out who is involved at the country level and make sure that they all stay involved in some capacity in order to bring improved quality of life to mining communities.
 - Creating and maintaining a database of existing activity and contacts in specific countries could be a valuable resource for the partnership. It is a good opportunity to highlight what things that governments are doing well, things that governments are proud of (eg southern Colombia processing centers with very little mercury use, all controlled, all locally constructed technologies.)
- Economic incentive for the miners (more gold with less mercury) is required to see marked reductions in mercury use and general improvement for the quality of life of miners.
- Improve training on locally constructed, affordable retort fabrication and operation as well as increasing access to components and schematics.

Action Item: UNEP to follow-up with a new draft of the draft business plan reflecting discussions and written input for partner and potential partner consideration in advance of the next partnership meeting. (Done: 2 November 2007)

4. Next Steps

UNIDO suggested the next meeting of the partnership for 1 November. The reason for this early meeting is to have a revised draft business plan available for discussions at the Open Ended Working Group meeting on mercury from 12-16 November.

NOTE Change:

The next meeting of the partnership is now Tuesday 6 November 2007 from 10-noon EST.

Action Item: Participants to provide any proposed revisions on this meeting summary or via e-mail to bkoekkoek@chemicals.unep.ch by 9 November 2007. UNEP to post final meeting summary on UNEP mercury web-site.

http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm

Annex 1: Participant List

In Washington

Mercurio	Cristina	USEPA
Shoaff	John	USEPA
Brooks	William (Earl)	USGS
Burke	Jeffrey	National Pollution Prevention Roundtable
Echavarría	Cristina	Association for Responsible Mining
Gardner	Susan	US Department of State
Gurnedi	Alfredo	USGS - Latin America
Hoffman	Stephen	USEPA
Jackson	Gilbert	US AID
Mahaffey	Kate	USEPA
Pitkin	Barbara	USDOJ/ITAP
Vanegas	Wilkferg	Organization of American States
Whitehouse	Al	USDOJ/ITAP
Bailey	Marianne	USEPA
Engle	Marilyn	USEPA
Keane	Susan	NRDC
Koekkoek	Brenda	UNEP
Uram	Eric	UNIDO
Mwemena	Shabani	CASM
Sheldon	Christopher	CASM
Kohler	Veronika	CASM
Bilbao	Li-Tai	DOI/OSM
Johnson	Vivien	Fifi Bijou (UK)
Levin	Estelle	British Ethical Jewelers Association
Schein	Patrick	SP Trading
Diwani	Shamsa	Tanzania Women Miners Association
Barnito	Maria Laura	HERG Consulting

By phone

Shafer	Kristina	Artminers
Veiga	Marcello	UNIDO GMP
Neiva de Sousa	Rodolfo	UNIDO GMP
Fernandez	Luis	USEPA
Habegger	Lorne	Argonne Labs
Jara	Claudia	National Environment Commission Chile
Jackson	Gilbert	US AID

Annex II:

3 of the 5 presentations are attached.

UNEP Global Mercury Partnership

October 2007 - Overview

Presentation outline

1. Current status of the UNEP mercury programme.
2. Update on the UNEP Global Mercury Partnership:
 - Current status and GC 24/3 mandate
 - UNEP strategy document
 - Considerations in moving forward.

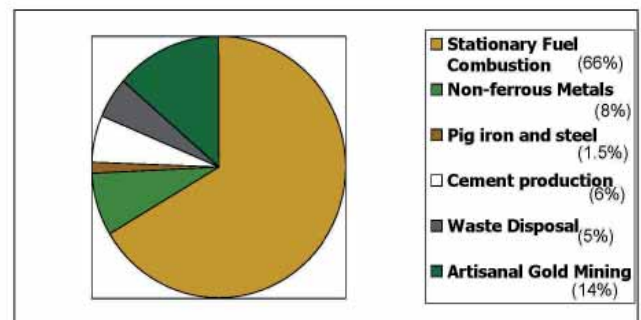
UNEP priorities are guided by GC Decisions...

UNEP Governing Council Decision 24 (February 2007)

- Commits to increased efforts on mercury.
- Identifies a number of actions on mercury, including:
 - Establishes an open ended working group; and a
 - Strengthened mercury partnership programme.
- Takes into account seven priority areas of work (paragraph 19).

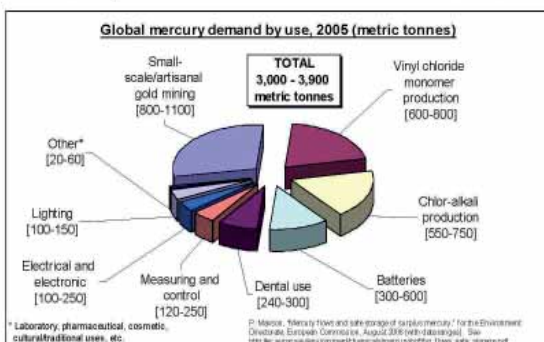
As well as information on emissions

Global Mercury Releases to Air, by source category, 1995



Pirrone, et al (2001), and Lacerda, 1997, from UNEP Global Mercury Assessment, Chapter 6.

...and other important information available, such as demand and use data.



Mercury ad hoc Open Ended Working Group (OEWG) Process:

- Two meetings of the OEWG before GC 25.
- OEWG1 will be from 12-16 November 2007 in Bangkok, Thailand.
- Purpose is to review and assess options to pursue mercury reductions, including enhanced voluntary measures and new or existing legal instruments.
- Report from the first meeting will feed into the UNEP GC Special Session in Feb. 2008.
- OEWG to report to UNEP GC 25 in February 2009.

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How will partnerships be reflected at the open ended working group?

- A status report on the UNEP Global Mercury Partnerships will be presented to OEWG1.
- Partnerships are the major component of the policy discussion on voluntary measures.
- Opportunity for partnership areas to profile themselves through side events at OEWG.

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Update on the UNEP Global Mercury Partnership

Governments and Stakeholders identified five mercury partnership areas in 2005:

1. Artisanal and small-scale gold mining;
2. mercury release from coal combustion;
3. mercury cell chlor-alkali production;
4. mercury reduction in products
 - batteries, dental amalgams, measuring and control (largely medical sector), electric and electronic switches, fluorescent lamps, cosmetics;
5. mercury air transport and fate research.

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What is the status of the current partnership programme?

- Leadership in 4 of 5 areas is from the United States, 5th area from Italy.
- 'Two-track process' (binding agreement versus voluntary partnerships approach) has reflected in mixed levels of engagement from governments and stakeholders.
- Partnership leads are proceeding on the business planning process.
- UNEP GC Decision 24/3 requests UNEP to strengthen the UNEP Global Mercury Partnership.

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GC 24 Decision on Partnerships, Feb.2007

Requests UNEP Executive Director, working in consultation with Governments and other stakeholders, to strengthen the UNEP Mercury Partnerships by:

- a) Developing an overarching framework for the UNEP Mercury Partnership, inter alia through organizing a meeting of partners and other stakeholders, including the:
 - Development of business plans
 - Identification of partnership goals
 - Development of operational guidelines
- b) Expanding the number and scope of partnerships to include new, growing or related sectors such as vinyl chloride monomer production, non-ferrous metals mining and cement production and waste combustion;
- c) Enhancing the artisanal and small scale gold mining partnership through, inter alia, increased cooperation with UNIDO, exploration of innovative market-based approaches and disseminating alternative capture and recycling technologies;
- d) Endeavour to secure adequate funds for the Global Mercury Partnership efforts.

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What is UNEP currently doing to strengthen the Partnership?

- Hosted an exploratory meeting with key players in June.
 - The meeting provided strategic direction on the overarching framework of the UNEP Global Mercury Partnership.
- Supporting the business planning process, as requested, for existing partnership areas.
- Consultation on the Overarching Strategy for the UNEP Global Mercury Partnership.
- Will host a Meeting of Partners in 2008. Date of the meeting should be confirmed at OEWG1.

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Overarching Strategy for the UNEP Global Mercury Partnership

- UNEP is currently consulting on the overarching strategy for the Partnership.
- The strategy document:
 - Considers proposed elements of an overarching framework
 - Proposes a business plan template
 - Provides considerations in enhancing existing partnerships
 - Outlines thought starters for new and emerging areas (vinyl chloride monomer production, cement production, waste combustion, supply and storage)

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Partners own the partnership...




- What type of overarching goals do you envision for the UNEP Global Mercury Partnership? What are the indicators of progress?
- Feedback on the overarching strategy from the individual partnership areas is an important element in this consultation process.
- A revised overarching strategy document will be prepared by UNEP as an information document for OEWG1. Last possible opportunity for input into this round is one week today.

Important elements for Partner Consideration...




- The proposed business plan structure, the discussion on enhancing the existing partnership, and resource mobilization.
- What further elements need to be considered/ explored for this partnership with respect to:
 - Setting objectives for the partnership area?
 - On-going partnership leads? Engaging new partners?
 - Mobilizing resources?
 - Linking to existing initiatives? Building and linking to new and emerging areas?

Global Mercury Project

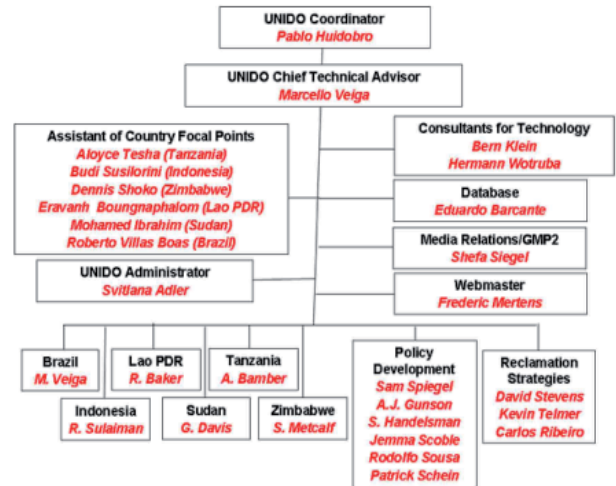


**Meeting the Needs of the Miners:
Making Intervention Work in
Artisanal and Small-Scale Gold Mining Communities**



Eric Uram
**UNIDO GMP
Focal Point with
UNEP Partnerships**

Venezuela, 2003



This is the biggest gold rush the world has ever seen

- 10 to 15 million artisanal miners producing 600-800 tonnes Au/yr in more than 60 countries
- About 50-100 million people directly and indirectly involved in artisanal gold mining



In the world as many as 9 million women and 2 million children directly employed (50% involved in gold mining)



Why is mercury in ASM a Problem?

- THE largest sector for mercury use ~ 1/3 of all demand
- Worldwide, estimated >1000 t/yr Hg lost by artisanal miners
- Second largest source of all mercury air emissions
- Lots of miners and community members with neurological problems
- Mercury is coming from developed countries such as European Union, USA and Japan



Why is this so?

- Mercury is relatively cheap
- Mercury is relatively easy to use
- Understanding of dangers is lacking
- Understanding of mining is minimal
- Great profit to be made by those selling mercury
- Few barriers to use
- Free trade makes it readily available



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Facts

- ASM is the main environmental and social problem related to mining activities in developing countries
- Most people in developing countries become miners to escape complete social marginalization
- Governments are generally not prepared to deal with issues related to artisanal mining
- In many rural regions, artisanal mining is an island of "prosperity" in a sea of poverty



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Mercury is just the Tip of the Iceberg

visible villain



- **Mercury Pollution**
- **Additional Environmental Impacts**
- **Degradation of Socio-Economic Conditions**
- **Health Impacts**
- **Lack of Economic Alternatives**

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Mercury is just the Tip of the Iceberg



- **Disrespect for cultures (conflicts)**
- **Degradation of moral values**
- **Drinking and drug problems**
- **Tax evasion**
- **Money laundering & smuggling**
- **High cost of living in mining villages**

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Global Mercury Project



GMP Pilot Phase Goals

- to reduce mercury pollution of international waters by emissions emanating from small-scale gold mining,
- to introduce cleaner technologies for gold extraction and to train people in their application,
- to develop capacity and regulatory mechanisms that will enable the sector to minimize mercury pollution,
- to introduce environmental and health monitoring programmes,
- to build capacity of local laboratories to assess the extent and impact of mercury pollution,
- to share information and build partnerships.

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Global Mercury Project



Accomplishments

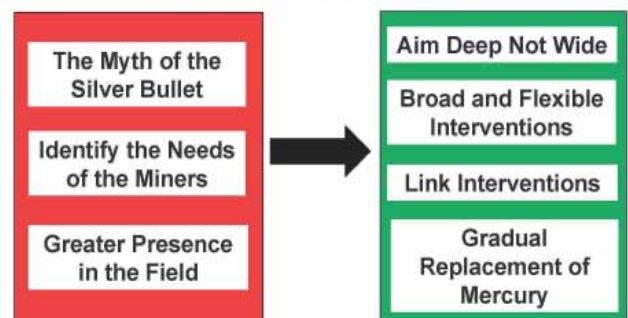
- About 30,000 miners trained in all 6 priority countries
- About 120 government employees trained
- Publications: 9 int. journals articles, 3 book chapters, 2 books, 37 presentations in conference proceedings, 35 reports, 4 MASc theses; 6 PhD theses (5 still in preparation)
- Database with 350 articles and reports on Hg pollution and ASM
- About 75 interviews in newspapers, radio and TV in all project countries plus the US (Chicago Tribune, New York Times, Wall Street Journal, etc) and Canada (Globe and Mail, Global News, Northern Miner, CBC, UBC Reports, etc.)
- All reports, books, movies, along with some pictures available to all at the GMP Website: www.globalmercuryproject.org

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Global Mercury Project 2

GMP – 2 Strategy



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Global Mercury Project 2

Intervention Level 1

- 5 year intervention
- Targeted towards countries with well-defined ASM sector
- Strong political support
- Strong financial commitment
- Demonstrated in-country capacity



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Global Mercury Project 2

Intervention Level 2

- 1-year duration
- Existing knowledge about country-specific ASM activities
- Strong political support
- Limited financial commitment and capacity

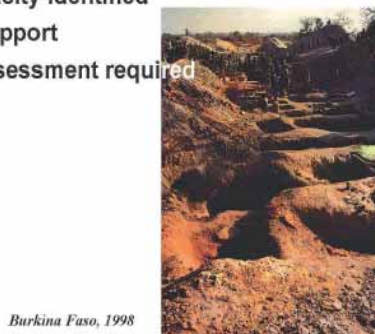


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Global Mercury Project 2

Intervention Level 3

- 3-month implementation
- Suitable where limited ASM sector knowledge exists
- Low or no technical capacity identified
- Limited or no political support
- Inventory/preliminary assessment required



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Global Mercury Project 2

Budget/Activity Summary

Objective	Level 1	Level 2	Level 3
Inventory	✓	✓	✓
Policy	✓	✓	
Health and Environment	✓	✓	✓
Training of Trainers	✓	✓	✓
Awareness Campaign	✓	✓	✓
Technology Transfer	✓	✓	✓
Sustainability Initiatives	✓	✓	
TOTAL	\$2,273,560	\$696,080	\$149,725

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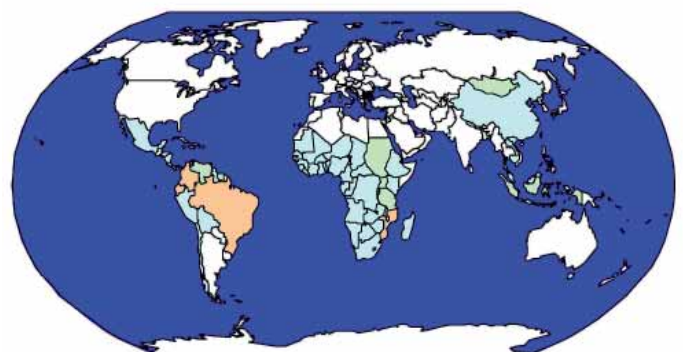
Global Mercury Project 2

Proposed Countries

- Level 1** ★
Brazil, Colombia, Ecuador, and Mozambique
- Level 2** ★
Indonesia, Mongolia, Sudan, Suriname, Tanzania, Uganda and Venezuela
- Level 3** ★
Angola, Belize, Benin, Bolivia, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Chile, China, Congo, Costa Rica, Cote d'Ivoire, Dominican Republic, DRC, El Salvador, Ethiopia, Gabon, Gambia, Ghana, Guatemala, Guinea, Guinea Bissau, Guyana, Honduras, Kenya, Lao PDR, Liberia, Madagascar, Malaysia, Malawi, Mali, Mexico, Namibia, Nicaragua, Niger, Nigeria, Panama, Peru, Philippines, PNG, Rwanda, Senegal, Sierra-Leone, South Africa, Swaziland, Togo, Vietnam, Zambia, and Zimbabwe

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Countries Identified for GMP2



Conclusions

- Immediately introduce MEASURES to reduce mercury exposure and emissions
- Actions must be bottom-up and top-down



Brazil, 2007
US EPA fume hood for gold shops

Conclusions

- A lack of understanding and commitment from governments limits the potential from a GMP intervention
- Controlling Hg trade will expedite solutions
- GMP will operate on different levels with interventions, with different budgets and only with government commitment to assist



Mongolia, 2002
Photo: R. Grayson

Conclusions

- We can no longer ignore this problem
- Strong participation from Governments, NGOs, Academics, Business and Industry is necessary
- GMP2 goal to intervene in 30 countries over the next 5 to 7 years
- UNIDO commitment to eliminate 50% of Hg emissions from artisanal gold miners by 2017
- **SOLUTIONS CAN / WILL HAPPEN WHEN WE ALL WORK TOGETHER**



Zimbabwe, 2003

Slide 1

ASM and Global Mercury

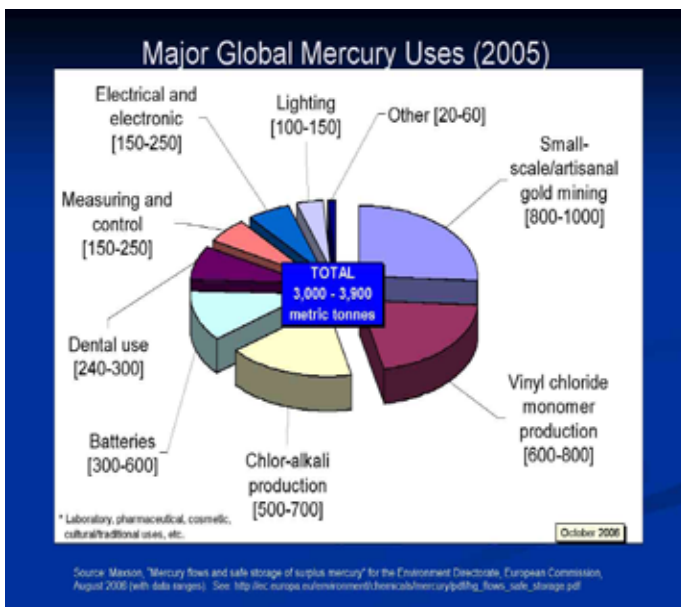
Susan Egan Keane
 Natural Resources Defense Council
 UNEP Mercury Partnership Program
 Artisanal and Small Scale Mining Partnership Meeting
 October 24, 2007

Slide 2

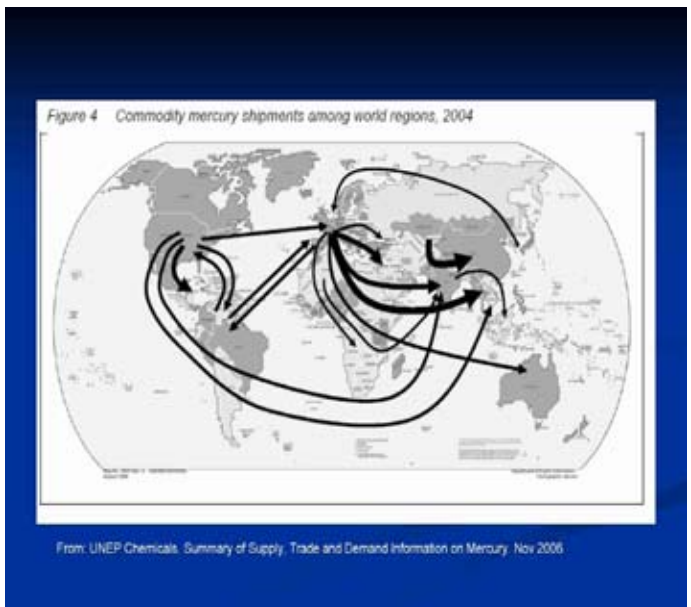
Mercury Pollution: A Global Problem Warranting International Solutions

- Mercury (Hg) cycling threatens global fish supply
- Primary exposure risk for pregnant women, children & sub-populations dependent on fish & mammals
- Artisanal & Small-Scale Gold Miners (ASM) especially experience acute health impacts
- W.H.O. (2005): **mercury may have not have a safe threshold of exposure**

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Key Elements of a Global Hg Reduction Strategy

- Close primary Hg mines
- Reduce, phase out Hg uses when alternatives readily available, cost effective and affordable
- Restrict Hg exports from developed countries
- Develop concrete plans and multi-stakeholder collaboration to reduce Hg use in ASM

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Artisanal and Small-Scale Gold Mining (ASM) Realities

- Extremely decentralized
- Activity often illegal in countries with very limited environmental or enforcement capabilities
- An important mode of employment where alternatives not easily found, and social or cultural mores can influence business practices
- Mercury-free/ low mercury alternative paths forward not yet clearly defined
- Largest use of mercury which may also require the longest time to fully address

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How can we achieve the ASM goal?

- Focus on highest priority countries and practices first
 - Which countries use the most mercury? What are the priority areas in those countries?
 - Which practices offer the highest reduction opportunities in those areas?
 - If you successfully change those practices, how much mercury reduction will you achieve? Does this contribute enough to the goal? If not where else can you work/what else can you do to get better reductions?

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Strategy for achieving the goal

- What alternatives should be promoted?
- What are the specific steps to change the practices **at scale**?
 - Training – where? How many people must be trained? How many trainers will that take?
 - Local production/availability of equipment – do you need innovation? Training of artisans? What will you do to promote the market?
 - Access to credit – microfinance? Other options?
- Who needs to agree to/ not oppose these changes?
- Who needs to actively champion these changes?

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Who has the resources?

- What resources are needed to make these changes **at scale**?
 - Financial
 - Human
 - Political/ social
- Who has resources/ who needs to be at the table?
 - Donors, international bodies, governments (all levels), private sector, local CBOs/NGOs, miners!
- Partnership = commitment of stakeholders to common goals, resources, timetables