



Global Mercury Project

Project EG/GLO/01/G34: Removal of Barriers to Introduction of Cleaner Artisanal Gold Mining and Extraction Technologies



From the Editor

This issue highlights fieldwork conducted at project sites as the GMP moves toward completing its implementation objectives. The Project Coordination Unit is working closely with Assistant Country Focal Points and many local implementation partners to introduce Technical Demonstration Units, launch mercury awareness campaigns, and return the results of health assessments to people in communities. In addition, an expanded policy group is collaborating with national experts to draft and revise regulatory reforms dealing with mercury use, while looking at trade, regional policy frameworks, community development, and economic policy. Mercury containment strategies are being developed for Brazil and Indonesia using remote sensing and GIS, and health solutions for people with mercury poisoning are being examined.

Implementation in the Field

The March 2004 GMP News reported on the GMP's intervention model (No. 4, p.1), namely the Transportable Demonstration Unit (TDU). The concept of mobile training facilities followed the recommendations of the International Labour Organization's 1999 Tripartite Meeting on Small-Scale Mining. The emphasis of the TDU is to transfer skills and technology through education. The GMP is fundamentally an education project whose mission is to build local resources and capacity.

In July, the PCU announced its education and training would focus on three areas: 1) reducing mercury pollution by introducing simple and cheap retorts, teaching miners not to amalgamate whole ores, and eliminating the use of copper plates; 2) helping miners increase their profits by developing more efficient processes and technology; and 3) training health care professionals to work with communities on mercury poisoning, as well as HIV, malaria, and other infectious disease.

These three elements – less mercury, more gold, better health – are the foundation of the GMP's educational awareness campaign. Implementation includes: identifying local partners to operate the TDUs; training teachers and health workers; and communicating the educational content of the awareness campaign to miners and local communities.



Sudanese nurse discusses health study with the head of Gugub village

Implementing in Sudan

In November 2005, a GMP educational campaign was implemented in Sudan. The objective was to teach the local trainers, including the Geological Research Authority of the Sudan (GRAS), local media professionals, and a nurse who was trained in mercury poisoning, behavior change education strategies, and family health issues. The action started in the village of Gugub, where trainers were taught by GMP Experts how to deliver awareness campaigns to miners. Once on site, trainers demonstrated screening, sluicing, and panning technologies to miners working in the village.

The campaign received significant attention from local television when Blue Nile State television produced a 45 minute documentary of the events. The report featured interviews with community leaders, and was broadcast across the state in the week following the campaign. To create a public presence in the villages, educational materials about the use of mercury were translated to Arabic and distributed to miners as teaching aids. Meanwhile, the results of the 2004 health and environmental studies were delivered to the communities. Participants in the study were pleased to learn that only about 1% of the population tested for elevated mercury levels. Levels appeared to be so much lower than in other mining sites for two reasons: mercury was only recently introduced to gold mining in Blue Nile State and most of the gold is relatively coarse-grained alluvial material which does not require amalgamation. Participants were provided health counseling based on their age, and how much mercury they are exposed to.

The Global Mercury Project (GMP) began in August 2002. The GMP demonstrate ways of overcoming barriers to the adoption of best practices and pollution prevention measures that limit the mercury (Hg) contamination of international waters from artisanal and small-scale gold mining (ASM). Six countries are participating in the GMP: Brazil, Lao PDR, Indonesia, Sudan, Tanzania and Zimbabwe. In addition, the GMP aims to introduce cleaner technologies, train miners, develop regulatory mechanisms and capacities within Government, conduct environmental and health assessments (E&HA) and build capacity in local laboratories to continue monitoring Hg pollution after the project.

Meeting in Zimbabwe

Also in November 2005, a three day stakeholder meeting was held in the town of Kadoma, where participants reached agreement on critical components of the TDU for implementation in early 2006. In attendance were partners from the Zimbabwe School of Mines, the Institute for Mining Research, the Ministry of Mines, and the Kadoma District Health Administration.

In Zimbabwe, the GMP is planning TDU activities for 15 separate communities. TDU trainers will run two week seminars concentrating on four areas: 1) working with district stamp mill operators to introduce alternatives to copper plate amalgamation; 2) teaching workers how to use retorts and how to protect themselves and their families from exposure to mercury vapor; 3) teaching miners to make their gold processing more efficient; and 4) delivering results of health and environmental studies to communities.

The stakeholder meetings were also attended by Cont Mhlanga, Director of the Amakhosi Theatre Company, who described a plan to use community theatre as a tool for initiating dialogue about mercury safety. Mhlanga is also producer of a weekly television drama about Zimbabwe's artisanal gold miners. Meanwhile, Zimbabwe's ACFP is working with the Ministry of Health in Harare to develop a national mercury awareness campaign.

Laos

In Laos, implementation of GMP project objectives will take place within the eight villages on the Nam Ou and Mekong rivers. These villages were the subjects of the 2003 Environmental and Health Assessment. Implementation will kick-off this Spring with stakeholder workshops in Vientiane and Luang Prabang. The Vientiane workshop will target government ministries and departments, including the Department of Geology & Mines, Ministry of Health, and Ministry of Science, Technology & Environment.

The Luang Prabang workshop will be dedicated to training local officials, especially village heads, the Women's Union and Youth Front, and a subcontractor who will carry out the TDU and Awareness Campaign activities. Other potential partners in GMP implementation could include the World Bank, World Wildlife Fund, Earth System Laos, and Ecolao. Field implementation will follow the stakeholder workshops, focusing on introducing simple manual sluice boxes, a variety of carpets, and retorts.

Indonesia

In Indonesia, implementation of the TDU and Awareness Campaign activities begins in February. For North Sulawesi, where the majority of artisanal miners are mixing both cyanide and mercury, the initial focus will be on promoting mercury-free cyanidation techniques. This will be followed by a public awareness and media campaign to increase knowledge about the health hazards related to mercury and cyanide exposure. The GMP will be partnering with local NGOs to implement the campaign over the next year. Meanwhile, in

Galangan, Central Kalimantan, the GMP is concentrating on training and building capacity of the local partners to become facilitators for the campaign activities. This includes working with local community development NGOs, as well as provincial and district health, environmental, and mining officers. Following the training, the GMP will take over TDU activities, providing miners educational opportunities to learn alternative processing techniques and about mercury health issues. The TDU will travel to several locations to reach different groups of miners and is expected to operate for nine months.

Brazil

The awareness campaign in Brazil started in November with the return of health results to miners from São Chico and Creporzinho. The 704 medical exams and chemical analyses of blood, hair, and urine were delivered and explained to the affected communities. Many of the miners in São Chico could not be located because of the deactivation of the mining activities in this area. In addition, several education seminars were held. Miners were advised against consuming fish from the local reservoir, which has tested high for levels of mercury. Interest in demonstration of retorts was also high, in part because of the rising cost of mercury in the region. This stage of the campaign was designed primarily to announce the TDU and full awareness campaign that will be conducted in the first half of 2006. More than 1000 educational posters and brochures were distributed, and a local poet, Mr. Edmilson Santini, composed rhymes (locally known as "cordel") to deliver 500 brochures entitled: "Don't cry for the spilled mercury." CDs with Mr. Santini's songs were also distributed, along with T-shirts given to miners.



Awareness Campaign in Brazil

Participating with the Center for Mineral Technology and the Ministry of Health were the Association of the Gold Miners of Tapajos (AMOT); the Vice-Mayor of the municipality of Itaituba, and representatives from the municipal departments of Mining & Environment, and Health. AMOT is currently coordinating interested parties to participate in next steps of the campaign.

Policy Progress in Zimbabwe

In December, a series of stakeholder meetings with the Government of Zimbabwe resulted in a consensus on draft regulations for mercury management. The regulations establish controls aimed at reducing mercury emissions and exposure, as well as regulating purchase, trade, and storage. The draft Regulations on Mercury Management provide standards for amalgamation, including the use of retorts, and for reducing mercury in tailings. Specific provisions protect pregnant women and children from exposure, and include measures for water protection, guidelines for milling centre managers, and mechanisms for community-based enforcement and monitoring. A series of workshops facilitated by UNIDO were attended by national and local officials from the Ministry of Mines, Ministry of Environment, and Ministry of Health, as well as mining associations and local organizations. These talks reinforced the shared commitment to phase out mercury in ASM through policy measures. The draft regulations are now being reviewed by the Government in advance of the 2006 Parliamentary Review of the Mines & Minerals Act.

Microfinance Kicks-off in Tanzania

November marked the launch of the Microcredit Initiative in Tanzania. Following consultations with local banks and microcredit institutions, UNIDO held education workshops with miners on different financial options through micro-savings and loans. Education focused on how village-banking can support technology transfer to increase productivity and improve safety. Working with the Ministry of Minerals & Energy, UNIDO obtained community perspectives for the development of a Code of Practice to supplement the 1999 Mining Regulations.

Global Task Force Meeting, Salvador, Bahia, Brazil, Sept. 2005

This GTFM of the GMP included many new faces after several project areas were expanded in April. Many people were meeting for the first time, and the conference served as an important opportunity to provide updates about the progress of specific areas and the direction of the project as a whole. During the meeting, project objectives and internal processes were clarified, and plans put in motion to implement Technical Demonstration Units and other key interventions in the six GMP pilot sites. In addition, there was progress made toward establishing an effective system for evaluating GMP successes, and working with countries to develop environmental policy for mercury. External participants from NGOs, the private sector, academia, and the medical community provided welcome contributions, helping to expand the overall expertise of the group, and establishing the GMP as a focal point for policy discussions about mercury use in artisanal gold mining. Long term objectives for implementing the GMP and envisaging a second phase of the project were also discussed.

European Union Bans Hg Trade

Marking the most stringent curb on mercury pollution to date, the European Union Council of Environment Ministers agreed in 2005 on a landmark decision to end all trade of mercury by the European Community. The EU decision, reached June 24 in Luxembourg, calls for a phase-out of mercury trading by no later than 2011. It also reiterates the EU's commitment to achieving a global phase-out of all mercury production, use, and trade, and reinforces the need for binding international law. "This is the type of concrete action we need to reverse the tide of mercury pollution in the developing world," says Marcello Veiga, Chief Technical Advisor of the GMP. *"It is getting harder for the world's exporters of mercury to justify continuing to trade mercury on the market. The urgency of the public health and environmental disaster is too great to ignore."* Until now, mercury has always been traded freely as a commodity on the world market. These EU trade restrictions are the first effort to prevent the spread of mercury to countries in Africa, Asia, and South America, where mercury use is prevalent, particularly in small-scale gold mining. The EU, U.S., and China are the main exporters of mercury. A phase-out of mercury use in North America and Europe has made the developing world the primary destination for the world's mercury.

Change in GMP Administration



In March, Dr. Marcello Veiga was installed as Chief Technical Advisor for the GMP, taking over for the retired Dr. Christian Beinhoff. Dr. Veiga, who served as the GMP's Small-Scale Mining Expert from 2002-2004, has worked on mercury and mining issues for 25 years, and is

widely regarded as one of the world's leading mercury experts. In addition to mercury, Dr. Veiga has worked extensively on environmental and social issues related to mining. He is also Associate Professor of Mining Engineering at the University of British Columbia in Vancouver.

Mercury Conference in Madison

Mercury pollution from artisanal gold mining will feature prominently on the agenda of The International Conference Series on Mercury as a Global Pollutant (ICMGP). Scheduled for August 2006 in Madison, Wisconsin, the biennial ICMGP is the world's largest gathering of international mercury experts, which is expected to draw more than 1000 participants. The GMP Chief Technical Advisor, is on the conference planning committee, and the GMP and conference organizers from the University of Wisconsin's Aquatic Sciences Center have been coordinating media activities, including two syndicated radio spots featuring interviews with the CTA: <http://ewradio.org/program.aspx?ProgramID=4126>
<http://ewradio.org/program.aspx?ProgramID=4147>



Activities 2005

- TDU and Awareness Campaign Implementation in Sudan
- Global Task Force Meeting in Brazil
- Regional Task Force Meeting in Zimbabwe
- Terms of Reference of TDU for Indonesia
- Draft Mercury Regulations for Zimbabwe
- Expansion of PCU Policy Unit
- Recruitment of Experts for Micro-financing
- Publication of Protocols for Environmental & Health Assessment
- Development of Local Implementation partners for Laos
- Naming of new Chief Technical Advisor
- Return of Health Results in Brazil and Sudan
- Launching of Awareness Campaign in Brazil
- Participation in GEF International Waters Conference
- Production of brochures and media materials for Awareness Campaign
- Participation in the Steering Committee meetings in preparation of the 8th Int. Conf. of Mercury as a Global Pollutant, Madison, Wisconsin



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Plans for 2006

- Implementation of TDU and Awareness campaign in Brazil, Indonesia, Laos, Sudan, Tanzania, and Zimbabwe
- Development of further public-private partnerships
- Drafting of International Policy Guidelines for Mercury Management in ASM
- Development of Mercury Mitigation and Containment Strategies for Brazil and Indonesia
- Examination of potential healthcare solutions for people contaminated by mercury
- Global Task Force meeting in Tanzania
- Participation in 8th Int. Conf. of Mercury as a Global Pollutant, Madison, Wisconsin, Aug. 2006
- Develop policy measures in all 6 GMP pilot countries
- Development of Technical Training Manual for TDU operators



Kids in the training-the-trainers session in Sudan.



Mining officers in Tanzania discuss the GMP strategies



Sam Spiegel and Dennis Shoko from GMP team meet with Zimbabwean authorities to discuss policy and micro-financing.