



**Communities and Small Scale Mining**  
**6th Annual CASM Conference**

**November 10th-15th, 2006**  
**Antsirabé, Madagascar,**

**MEETING SUMMARY AND REPORT**



*“ASM: From threat to opportunity”*

**The Final Report and Proceedings  
from the  
Sixth Annual CASM Conference  
Antsirabé, Madagascar,  
November 10th-15th, 2006**

**SUMMARY**

More than **250 conference participants from over 40 countries** came together from November 10th-15th, 2006 to share knowledge, experience and desires for positive change in the small scale mining sector at the Communities and Small Scale Mining 6th Annual CASM Conference (ACC) in Antsirabé, Madagascar.

<b>Acknowledgements</b>	<b>5</b>
<b>The venue</b>	<b>6</b>
<b>Overview</b>	<b>7</b>
<b>Session One: Opening ceremony</b>	<b>8</b>
Welcome and presentation of conference objectives	8
Welcome on behalf of Madagascar	8
Keynote speakers: Views from the public sector	8
<i>The Hon. Dr. Lami Hamza, Nigeria</i>	8
<i>The Hon Jean Kamoni Mokota Lissa, DRC</i>	9
<i>The Hon. Andriamahefamparany Oliver Donat, Madagascar</i>	9
Keynote speaker: Views from the Private Sector	10
<i>Gary O'Brien, President &amp; CEO, QMMASA</i>	10
Keynote speaker: Views from the NGO Sector	11
<i>Ms. Nanie Ratsifandrihamanana, WWF</i>	11
<b>Session Two: Welcome to Madagascar; An introduction to the history, culture, biodiversity and mineralogy of Madagascar</b>	<b>12</b>
Overview of Development and History of Madagascar	12
Good Governance in Madagascar and Application to Small-scale Mining	13
A Case Study of Decentralization Management of Small-scale Mining	13
Commercialization of ASM Products	14
Wealth at the Bottom of the Pyramid	15
Impacts of Small-scale Mining on Madagascar's Biodiversity	16
ASM in the Fianarantsoa Corridor: Is It Compatible with Biodiversity Conservation?	17
<b>Session Three: Policy Environments; Exploring the policy environments in which ASM is managed and the tools available to improve the management of mineral resources</b>	<b>19</b>
A Modelling and Simulation Framework to Monitor ASM Activities in Developing Countries, and Example from Madagascar	19

Tools for mining policy development and implementation	20
Clustering for Success:	20
Strategies for improving the management of natural resources and poverty reduction	21
Strategies for improving the management of natural resources and poverty reduction	23
<b>Session Four: Country Experiences; A selective review of worldwide country experiences focusing on the management of ASM</b>	<b>24</b>
Global Overview of ASM	24
ASM experiences Asia—case study, Mongolia	25
ASM in India	26
ASM experiences, Peru	26
ASM experiences in Eastern Africa	27
ASM experiences—case study, West Africa	28
<i>Burkina Faso and Ghana</i>	28
<i>Alternative Community Livelihood Program—case study, Ghana</i>	29
ASM experiences—case study, Central Africa	29
Mozambique	30
<b>Session Five, Part 1: International and Regional Initiatives; A selective review of progress made in some international initiatives with which CASM works</b>	<b>30</b>
The Kimberley Process and the Diamond Development Initiative	31
The Mwadui Community Development Initiative, Tanzania: the Diamond Development Initiative in Action	31
Putting the Kimberley process to the test: Congo (Brazzaville) experiences	32
PACT's work in the Democratic Republic of the Congo	33
The relevance of the Extractive Industries Transparency Initiative to ASM	34
Natural resources assessment and management in post conflict environments	35
"Keeping Minors out of Mining"—the ILO Program to eradicate hazardous child labour from mining	36
The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development	37
<b>Session Five, Part 2: International and Regional Initiatives; Brief reviews of progress of other initiatives, including sector and commodity specific initiatives</b>	<b>39</b>
The ICMM resource endowment study, relevance to ASM	39
The GEF Global Mercury Project	40
The Association for Responsible Mining and future collaboration with CASM	41
1. <i>Cristina Echavarría, Director</i>	41
2. <i>Ervin Renterría, Board Member</i>	41
The industry view of "cradle to grave" jewelry chain	42
<b>Session Six: the Annual CASM Conference (ACC)</b>	<b>43</b>
<b>Sessions Seven, Eight and Nine: Thematic Working Groups and Workshop Reports</b>	<b>44</b>
Thematic Working Group One: Finding innovative solutions to conflicts and encroachment of ASM into protected and conservation areas	44
<i>Introductory presentation:</i>	44

<i>Breakout Group: Presentation on The Gorilla Organization and The Durban Process</i>	45
<i>Breakout Group One Discussion</i>	45
<i>Breakout Group One Conclusions and recommendations</i>	47
Thematic Working Group Two: The role of ASM in civil strife and the reconstruction process, with a particular focus on the African Great Lakes Region and West African Experiences	48
<i>Introductory presentation: Karen Hayes</i>	48
<i>Breakout Group Two Discussion</i>	48
Thematic Working Group Three: The progress in employing technological innovation to improve the health, safety and environmental performance of ASM	50
<i>Introductory presentation: Nellie Mutemeri</i>	50
<i>Breakout Group Three Discussion</i>	50
<i>Breakout Group Three: Conclusions and recommendations</i>	51
Thematic Working Group Four: Managing the relationship between large scale mining companies and ASM	52
<i>Overview presentation:</i>	52
<i>Ghana; Tony Aubyn, Head, Corporate Affairs and Social Development</i>	53
<i>AngloGold Ashanti; Charles Loots</i>	54
<i>Democratic Republic of Congo; Karen Hayes</i>	55
<i>Democratic Republic of Congo; Joseph Mbaya, Security Manager</i>	55
<i>Democratic Republic of Congo; Tim Hart, SRK Consulting</i>	55
<i>Breakout Group Four: Conclusions and recommendations</i>	56
Thematic Working Group Five: The establishment of fairer trade and ethical standards and systems for ASM and the need to expand traceability to other commodities beyond diamonds	57
<i>Introductory Presentation: Fair Trade: An Opportunity for Artisanal and Small Scale miners in the Marketplace</i>	57
<i>South Africa: The Kgabane Trust and Interwoven Jewellery</i>	57
<i>Ghana: Fair Trade Gold Mining? A Case Study of New Abirem</i>	58
<i>Main challenges for ASM in fair trade labeling</i>	58
<i>Conclusions</i>	59
Thematic Working Group Six: Addressing Gender, Human Rights and Multiculturalism in Responsible Mining	60
<i>Breakout Group Six Discussion</i>	60
<i>Breakout Group Six: Conclusions and recommendations</i>	61
<b>Session Ten: Closing Ceremony</b>	<b>63</b>
<b>The side events</b>	<b>65</b>
The field trips	65
The ARM Public Consultation for Standard Zero on Fair Trade Artisanal Gold and Associated Precious Metals By-Products	65
<b>The participants</b>	<b>66</b>

## Acknowledgements

CASM extends its sincere appreciation for the support received for this event from:

- The United Kingdom's Department for International Development (DFID),
- The World Bank,
- The staff of the Ministry of Energy and Mines of Madagascar,
- The staff of the PRISM project,
- The companies, organisations and projects exposing during the expositions both in the yard of the Hotel des Thermes as well as in front of the railway station,
- The companies supporting the wellbeing of the participants

The CASM Secretariat also expresses its gratitude to those companies in Madagascar who assisted and hosted site visits for the post-conference field trip, including Harson Development for making the logistics possible for such a large conference in the small town of Antsirabe.

Further thanks is given to the many speakers and workshop leaders whose time and energy made the learning events both challenging and rewarding.

Finally, CASM acknowledges the various contributions of Veronika Kohler of CASM and, without whose hard work the event would not have been as successful, or as enjoyable.

## The venue

The CASM 2006 was held in Antsirabe in Madagascar. Antsirabe is a small town three hours south of Madagascar's capital city Antananarivo. It is situated in the highlands at about 1500 m altitude. It is an industrial centre with agro-industry, breweries, food and drinks production etc. At the same time it is the traditional gemstone centre of Madagascar. In the vicinity of the city important pegmatites with gemstone mineralization are outcropping and exploited for nearly a hundred years. Tourmalines, beryls, rose quartzes, rock crystals, and other minerals are frequently found in these remote mines by local peasant miners and traded in regional markets. Based on these products, in Antsirabe a local cutting industry was developed.

Madagascar has been supported within the framework of two World Bank funded project measures in the reform of the mining sector. These projects looked particularly into the gemstone sector, both from the exploitation as well as from the cutting and polishing side.

The Government of Madagascar and the local administration at Antsirabe are dedicated to develop a sustainable and normalized gemstone sector and foster the addition of value within the country.

## Overview

CASM chose “ASM: From Threat to Opportunity” as the theme of its 2006 annual conference. This theme represented not a catchy slogan, but rather CASM’s belief that by exchanging information and adopting best practices, artisanal and small-scale mining can advance economically, environmentally and socially. The conference offered 250 people from over 40 countries the opportunity to share experiences and knowledge that can serve as models for further progress. Together, conference participants explored technological, educational, entrepreneurial and public policy initiatives that show promise as tools for sustainable development in the sector.

Over the course of three days, participants learned of initiatives that have been successful in advancing artisanal and small-scale miners’ skills and earning potential, reducing their impact on the environment, transitioning them to alternative employment within or beyond the sector, and formalizing the organization of those who continue to practice ASM. Topics discussed at the conference also included constructive resolution of disputes between large scale and small scale mining, approaches to gaining ASM cooperation in the protection of biodiversity regions, and successful approaches to resolving the myriad problems in post-conflict societies.

The conference’s ability to cover so much ground in just three days demonstrates CASM’s core value proposition: that change and progress in the sector begin with open communication. The conference brought together people who, without CASM, would have no opportunity to know one another’s work, much less discuss one another’s strategies for building on success and confronting challenges.

The significance of CASM’s presence in Antsirabe was equally clear. The stalls at the minerals and handicrafts market set up a few blocks from the host hotel buzzed with activity as conference participants took advantage of the opportunity to connect directly with the local economy. Lights at local restaurants burned late into the night as conversations begun during the conference proceedings continued well after hours. And participants capped off the event by engaging in some ad hoc microfinance activity that provided funding to three exhibitors—two local and one international—at the conference’s technology fair.

But the event’s greatest impact will be felt in the months to come, as participants return to their home countries and local communities freshly armed with new insights to inform and improve their strategies for realizing ASM’s full socio-economic potential. The conference left no question that the opportunity is there—and participants left the conference better prepared to seize it.

## **Session One: Opening ceremony**

### ***Welcome and presentation of conference objectives***

Jon Hobbs, Department for International Development (UK) and CASM chairman

Although ASM is a forgotten element of the mining sector, it has the potential to be the most important segment of mining in developing countries. The need to unlock that potential inspired the theme of the conference, "ASM: From Threat to Opportunity." The goal of the conference is to seek concrete proposals for strategies that can promote progress in ASM. Those strategies can move the ASM discussion beyond conflict issues to the realization of significant development opportunities.

Reaching those development objectives will require the ASM community to align itself with the priorities of developing nations. Partnership and the ability to work in concert will be essential to ensure that those priorities can be met in harmony instead of being viewed in terms of competing projects. By fostering open communication and sharing of knowledge, experience and ideas, this conference aims to better empower each of its participants to play an active role in realizing these goals. In addition, at the local level, the conference represents an important milestone for Antsirabe and Madagascar.

### ***Welcome on behalf of Madagascar***

Deputy mayor, Antsirabe, on behalf of Mayor Mme. Ramalason Olga Vololodonirina, and Rabenatoandro Lantoniaina, Chief of the Vakinankaratra Region, welcomed conference participants to Madagascar. They stated that it was a great honor and a great source of pride to have been chosen to host CASM's sixth annual conference and expressed their confidence that the conference would effect positive change in ASM and play a role in moving the "threat to opportunity" theme from concept to reality.

### ***Keynote speakers: Views from the public sector***

#### **The Hon. Dr. Lami Hamza, Nigeria**

Permanent Secretary, Ministry for Solid Minerals, Nigeria  
Head of Nigerian Delegation

Mining is dominated by small entrepreneurs. This conference is part of a learning process in which Nigeria is engaged with the goal of optimizing the sector's development potential.

With three to four million people dependent on informal mining for subsistence, ASM development initiatives are essential to improve their lives, lessen environmental degradation and stem the tide of lost revenue. The Nigerian government is determined to draw international capital to the country's mineral resources, and AMS



miners must be participants in that process. To that end, a new law to be passed in the coming days will minimize the environmental and socio-economic impacts of mining. Under this law, the mining ministry is to be restructured to include new departments for ASM and environmental oversight.

The government is convinced that development of the ASM sector can reduce poverty, and in accordance with that belief has instituted short- and medium-term strategies designed to achieve that objective. Already, national poverty reduction programs have integrated ASM. The government's priorities are environmental management and occupational safety and health. In addition, it is actively engaging in the rehabilitation of abandoned mine sites.

Nigeria's presence at and participation in the CASM conference underscores its confidence that the conference will play a role in further advancing ASM's development potential.

**The Hon Jean Kamoni Mokota Lissa, DRC**

Deputy Minister of Mines, The Democratic Republic of Congo  
Head of the DRC Delegation

The DRC delegation congratulates CASM on the vision articulated by its conference theme and its focus on uncovering the opportunities inherent in ASM activity. Better integration of ASM offers benefits to many, not only within but beyond the ASM community.

ASM must not only generate revenue but also be managed so that it can evolve into an engine for development. Its potential to do so already has been demonstrated by the extent to which it has contributed to filling the economic gap left by large-scale industry. Thus, ASM management must be engaged for and committed to economic development.

The DRC is entering a new era of good government. Its delegation wishes to express its thanks to the World Bank and the European Union for their support in making this transformation possible, and it invites CASM to conduct its next African conference in the DRC.

**The Hon. Andriamahefamparany Oliver Donat, Madagascar**

Minister of Mines, Madagascar

The government of Madagascar welcomes participants to the conference and expresses its interest in participating in and contributing to ASM development strategies whose impact will be felt not only within the city, but also worldwide.

Madagascar is honored to be chosen to host a conference of this size. The choice of Antsirabe is significant because mining and tourism are the focus of development

initiatives in the city. The government wishes to express its gratitude to CASM for its dedication to African development.

For Madagascar, the conference's theme and focus on opportunity are particularly resonant as the country pursues economic growth, good governance, and environmental protection. ASM rushes encourage corruption, conflict, and loss of economic opportunity, and addressing these problems is a priority for the government. Thus, it looks forward to participating in this global discussion of workable solutions. The presence of the audience represents the single most important component of the conference's potential for success both locally and globally.

### ***Keynote speaker: Views from the Private Sector***

#### **Gary O'Brien, President & CEO, QMMASA**

Member, Rio Tinto Group

With 400 participants from 40 countries, the 2006 CASM conference represents an excellent opportunity to realize ASM's development potential.

Gaining an understanding of ASM's social and economic origins is essential to moving the sector forward. Madagascar's government recognizes governments' role in advancing sustainable large-scale, small-scale and artisanal mining in a manner that demonstrates respect for environmental protection and does not cause harm to the environment.

Initiatives undertaken by governments and corporations must recognize the universal value in promoting healthy communities as well as sustainable development. The publication of the MSSD report served to alert companies to the need to restore public confidence. Mining companies understand that profits cannot come at an unacceptable socio-economic cost.

One of the report's greatest values was that it defined the number of men, women and children involved in ASM. It also demonstrated the extent to which, in many countries, ASM output equals or exceeds that of LSM. Despite the health risks, destruction of families and other repercussions it causes its practitioners, the reality is that all too often, it is the only option miners have for survival. Thus, though certain risks of ASM are inherent and unavoidable, but avoidable risks must be mitigated to the extent that is possible.

Compensation practices can lead to conflict, but calling in authorities poses other risks. Local customs, lack of sufficient land, and the need for a survival option must be recognized. No corporation wants to be seen as a Goliath trampling on the rights of powerless locals.

## ***Keynote speaker: Views from the NGO Sector***

### **Ms. Nanie Ratsifandrihamanana, WWF**

Conservation Director, World Wildlife Fund

ASM represents risks to governance, public health, the environment and sustainable development, but the NGO sector recognizes its economic development potential and importance.

As ASM operates outside the legal structure, it is a resource waiting to be tapped for use in reinvesting in local and national economic development initiatives. It is also necessary to address the social destruction it causes and its impact on reduced diversification of the economy as agriculture and other sectors are abandoned in favor of ASM. Equally important concerns that require attention include the incidence of injuries and deaths in mines, the rise in STDs and HIV/AIDS, and other serious health impacts. Adding to the complexity of the problem are such issues as loss of vital habitats, biodiversity, and environmental degradation.

What role can NGOs play in formulating solutions to these problems? NGOs can:

- Represent civil society
- Contribute sectoral skills and experience
- Support under-resourced government agencies
- Establish relationships with local communities and actors in the field
- Support good governance; policy and regulatory development; improved education; improved access to social and health services and infrastructure
- Help governments develop and test production technology

It is imperative that NGOs play a role in backing and promoting governance policies that conform to best practices standards, transparency, and education. ASM's potential problems can be significantly reduced as a consequence of NGOs' participation.

## **Session Two: Welcome to Madagascar; An introduction to the history, culture, biodiversity and mineralogy of Madagascar**

### ***Overview of Development and History of Madagascar***

Jean Luis Rabeharisoa, USAID

An island of 592,800 square kilometers, Madagascar is home to 18,600,000 people who represent a rich diversity of ethnicities and cultures. These include 18 Malagasy tribes as well as Comorians, French, Indians and Chinese. Religious life in the country is equally varied: 47% of the population practices traditional beliefs, 45% are Christian, and 7% are Muslim. Malagasy and French are spoken in Madagascar.

The island was settled by Africans, Indonesians and Muslim traders between the fifth and fifteenth centuries, and small Malagasy kingdoms had been established by the seventeenth century. French colonization began in 1895-96, and Madagascar did not achieve independence until June 26, 1960.

Student and worker unrest in the early 1970s culminated in the election of President Ratsiraka, who held power for two decades, was ousted in the early 1990s, and returned to the presidency in 1996. The December, 2001 presidential elections sparked violent conflicts between his supporters and those of current President Ravalomanana, who achieved recognition by the international community in June 2002.

Madagascar's gross domestic product in 2004 US dollars is \$4.4 billion, or \$240 per capita. Its natural resources include graphite, chrome, coal, bauxite, ilmenite, nickel, gold, tar sands, hardwoods, and precious, semiprecious and ornamental stones. As recently as the 1980s, ASM activity was limited on the island, with a focus on emeralds, aquamarines and tourmalines. However, discoveries of sapphires in 1991, 1994 and 1998, followed by discoveries of rubies in 2000 and 2001, have brought ASM to the forefront of Madagascar's economy. The country's goals for sector development include:

- Strengthening transparency and governance in mining
- Fine-tuning the sector's legal and regulatory framework
- Strengthening private sector associations
- Promoting decentralized management of mineral resources through institutional reform
- Promoting private investment and initiatives for added value in the sector

## ***Good Governance in Madagascar and Application to Small-scale Mining***

Andry Ralijaona  
Bonne Gouvernance Directorate  
President's Office, Madagascar

The Madagascar Action Plan includes ASM as part of its poverty reduction strategy. It also calls for environmental protection and safeguarding of the country's biodiversity. The government wants to promote the idea that the environment must be cherished and valued, but at the same time it recognizes the economic significance of development of the gem mining sector. Its goal is to find a way to incorporate both into the country's future.

Good governance requires a balanced vision of natural resource management to ensure that national resource development benefits local communities as well as the region and the nation. Realizing benefits at the local level will involve the institution of some measure of decentralization. Alongside this need for equitable geographic distribution of benefits is the equally important necessity of taking steps to ensure that those benefits are sustainable and endure for future generations, as through educational programs.

Another essential element of good governance is that laws are right, fair, unbiased, and not formulated, enacted or enforced in a manner that favors any stakeholder group.

Madagascar's decision making and implementation processes are represented graphically by an octagon whose sides are labeled:

- Impact oriented
- Responsive and accountable
- Inclusive
- Right
- Action learning
- Transparent
- Unbiased
- Sustainable

The ultimate goal is to have a positive impact on the population. Each of these terms and the principles they represent ultimately must serve that overriding goal. In terms of strategic objectives, Madagascar seeks to achieve effective enforcement of standards and legislation; increase tax revenue; and increase the capacity and income of miners. However, again, benefits to the population are paramount.

Achieving change requires the right team, one that is not hampered by nepotism or corruption; embraces visibility and accountability at each stage of the process; and has the courage to try new strategies.

***A Case Study of Decentralization Management of Small-scale Mining***  
in the Antanimbary Rural Municipality

Grégoire Rabenja  
NGO Green, Madagascar

The goal of this project was to alleviate poverty by way of strengthening capacity of local stakeholders within the artisanal mining sector. Its mission was to implement good governance of mining resources through the implementation of four steps:

1. Evaluation of the field situation
2. Strengthening of authorities
3. Formalization of artisanal miners
4. Integration of ASM into the local development plans

During the implementation of the project members of the local administration (delegates from the majors office, of the commune councils, and village leaders) have been sensitized on their role as facilitators for legal artisanal mining and trained in order to deal with recent legislation and illicit artisanal mining. Artisanal miners and gold traders were registered officially, both paying small fees to the local administration. As a result the local administration developed strong commitment towards active management of the sector and formalization of informal activities. The financial return from fees and levies have been invested into actions such as social infrastructure development and the optimization of livelihood conditions of artisanal miners. Finally, the artisanal mining has been considered as an important economic activity in the framework of the revised and adopted regional development plan.

### ***Commercialization of ASM Products***

Tom Cushman, Advisor  
Gemological Institute of Madagascar

There are 100 million people worldwide who depend on ASM for income, but only 13 million of them are miners. To ensure that everyone in the chain has a part in realizing the added value and return on investment possible through ASM, it is proposed that we adopt a view of all stakeholders as being part of the "ASM ecosystem."

In Madagascar, stones are exported in their raw state. To add value, the country must develop its capacity to export not only raw but also cut, polished and set stones. That's not to say that Madagascar should make it a goal to end all export of raw stones, which also generate revenue. However, it needs to move in the direction of expanding participation in all levels of the process of taking a stone from its raw state to a finished consumer product.

As education is a key step in achieving that goal, the Institut de Gemmologie de Madagascar operates the following programs:

#### Gemology School

- FGA diploma

- Practical gemology
- Night school
- Sapphires-only program
- Gemology pour tous
- Faceting I & II
- Cabochons
- Teacher training
- Public workshops
- Fabrication

#### Lapidary School

The courses provided are open to Malagasy and foreign students with the subjects being provided in French and English language. Tuition fee is as low as 150 – 200 U\$ per month.

The Gemological Institute also has pursued opportunities that have resulted in the manufacture of polishing equipment that once had to be imported. Both, the institute itself as well as the flourishing cutting and polishing workshops are benefiting from the locally produced equipment and imported diamond and other high tech consumer goods for cutting.

In addition, it is focused on market development that will enable expansion into and further penetration of the international market. National and local markets will remain important to revenue generation, but international market expansion represents the greatest opportunity for revenue growth, which Madagascar can pursue successfully only through a program that includes educational programs implemented throughout the country.

### ***Wealth at the Bottom of the Pyramid***

Dr. Lucie Phillips

Consultant to USAID, World Bank and Government of Madagascar

PGRM studies have revealed that ASM offers the best off-farm employment opportunities for rural young people in Madagascar. Revenue from ASM exceeds that of agriculture or livestock, and revenue derived from gold panning is even greater. The results of the study vary regionally and by the circumstances of the individuals (for example, results for old women differ from those for young men).

How can the quality of these opportunities be improved?

Elements of the adaptations that need to be implemented include establishment of a new legal framework, new technology, new management, more effective governance, and financial services. This model is being proven on a global scale based on experiences reported in communities worldwide.

Education and training are key steps and depend on collaboration with mining cooperatives. Madagascar cannot compete with Sri Lanka or Thailand. Its income is derived primarily from selling rough or tumbled stones. But through education and

training, it can expand its facility to compete successfully in the international jewelry markets.

Leveraging technology is another critical element. Something as simple as possession of a cell phone equates to higher seller power. Internet access at the Rural Mines Office will provide global price information. Email and text-messaging capabilities will improve access to and relationship-building with established customers.

The concept of new management embraces the institution of such organizations as miners associations, gold panning corridors and global buying networks. Administration plays an equally important role and encompasses mine rush management strategies, integration of environmental protection, and simplification of tax payments through such enhancements as one-stop export processing and provisions for foreign buyers. Measures of this kind contributed to a doubling of legal gemstone exports from 2004 to 2005.

By taking control, the government has promoted an upward trend toward greater economic opportunity in ASM.

### ***Impacts of Small-scale Mining on Madagascar's Biodiversity***

Martin Nicoll, Program Director  
World Wildlife Fund, Madagascar

Madagascar is one of the world's richest biodiversity regions: one quarter of the world's species occur only in Madagascar. Maintaining this level of biodiversity is critical to the country's development of tourism, which, in turn, increases the market for artisanal products.

In addition, Madagascar's forest products are key ingredients in medicines on which the local population depends. However, only 10% of the country's forests remain, and many species living in forest areas are rare and threatened. The problem is exacerbated by the fact that most ASM areas overlap with the remaining priority biodiversity areas, which is prompting further forest clearance and causing physical disturbance to the environment and environmental services. In addition to these direct challenges to biodiversity, the country must contend with indirect factors. Lack of governance means ASM can operate under essentially lawless conditions in many high diversity areas, and if governance is not established quickly as new ASM areas emerge, threats accumulate to a point of no return. A general principle applies here: if governments don't come in quickly to establish order in new ASM areas, it can be almost impossible to for those areas to recover later.

At the same time, it's necessary to recognize that ASM is here to stay, that it generates hard currency revenue on which many people are dependent, and that it favors otherwise poorly developed regions. Therefore, its problems notwithstanding,



there is a need to move forward and focus on reinforcing its positive aspects and finding solutions to its problems.

As part of the Madagascar Action Plan, President Ravalomanana has committed to tripling “protected area” coverage to 6 million hectares by 2008; more than 2 million hectares already have been declared protected. Conservationists welcomed this news, but the commitment poses a threat to ASM. The solution is to foster cooperation by way of the formation of a joint committee, formed by the environmental and mining ministries, to adjudicate on mines and the environment. Within this construct, new policies will be developed to govern ASM under the Madagascar Action Plan.

### ***ASM in the Fianarantsoa Corridor: Is It Compatible with Biodiversity Conservation?***

Mark Freudenberger  
Regional Coordinator of the ERI/USAID Fianarantsoa

The forest corridor is a highly mountainous environment approximately 500 km in length. ASM has occurred in the corridor for decades, perhaps centuries, and the remains of gold mining, panning and trench digging have left scars that remain present and visible to this day. In addition, rush mining and illegal ASM remain problems.

How do you restore environments damaged by mining?

How do you make mining more ecologically friendly?

The answers to these questions depend on our ability to formulate solutions that employ collaboration. Rush invasions in 2003-2005 damaged some of Madagascar’s most sensitive environmental areas. An anarchistic approach can cause immediate spot damage to these areas, and this damage can be significant.

At the same time, we have to consider the problems faced by miners, who are the poorest of the poor, caught in debt, virtually indentured and earning almost nothing. Malaria is prevalent within the mining population, as is HIV/AIDS.

Traditional leaders are extremely alert on the risks of artisanal mining damaging the forest heritage of the region: “The local population controls in a very limited fashion corundum mines. If it continues at the same rhythm of last year, we will always be the big losers. But it’s us that the ancestors of each clan passed down the legacy of these forests.” Further worries refer to the drain of wealth by artisanal mining leaving no benefits to local communities.

The government evicted the miners in 2004 and the area has been declared protected, but how do you balance that to create win-win situations that respect both

miners' needs and the need to manage and restore the environment? This is the sort of question the conference can help to answer by offering us the chance to learn from international perspectives.

## **Session Three: Policy Environments; Exploring the policy environments in which ASM is managed and the tools available to improve the management of mineral resources**

### ***A Modelling and Simulation Framework to Monitor ASM Activities in Developing Countries, and Example from Madagascar***

Fenintsoa Andriamasinoro, Research Scientist  
BRGM, Orleans, France

Our focus is to improve the future of ASM in terms of sustainable development, which will serve to reduce poverty by increasing miners' income, and in terms of improved governance, which will reduce clandestine buying channels that deprive the state of revenue.

Modeling can serve as a tool for proposing solutions and considering their likely results. It is a useful tool in that it deals with the complexity of the issues and, by way of reproduction and abstraction, can help decision makers not only to formulate answers, but also to integrate their solutions into the projected results of proposed policies. Modeling and Simulation can, for example, calculate the impact of an increase in quartz prices on artisanal and small-scale miners' quality of life.

Preliminary scientific results of the use of modeling and simulation have been promising. During the period 2004-2006, the authors' success included two international publications with a reading committee and three international communications with a reading committee; in addition, the organizers of the 2005 Summer Simulation Multiconference honored their work with the Best Paper Second Runner-up Award of the Summer Computer Simulation Conference.

Notwithstanding these initial indications of success, the methodology requires further improvement in the areas of data collection, analysis and validation as well as reproducibility. Another goal is to make it a more end-user-oriented tool that serves to reduce and bridge the gaps between modelers and thematic experts or scientists and decision makers.

The next development stage is called Is@tem (Interoperable System [applied to] Territory and Environmental Management). This is envisioned as an improved approach to data collection and analysis that encourages a more user-participatory approach by easing the user's ability to conduct simulation design and engage in the resulting scenario analysis. As further progress in the next round of design tasks will require a participatory approach that incorporates user input, the authors invite prospective users to provide them with feedback about their needs. By providing such feedback among a broad range of actors, the CASM conference can play a role in

taking modeling and simulation beyond the realm of pure science and into that of real-world solutions.

### ***Tools for mining policy development and implementation***

Peter Nelson, Managing Director  
Land Use Consultants, Bristol, United Kingdom

This presentation described a trio of diagnostic tools: environmental impact assessments (EIAs), strategic environmental assessments (SEAs), and sustainability appraisals. It offered the following comparison:

<u>EIAs</u>	<u>SEAs</u>
Procedural	Conceptual
Project oriented and site specific	Strategic and open ended
Reactive	Proactive
Few alternatives, if any	Many variants
Output and permit driven	Process driven
Omits unforeseen cumulative impacts	Considers cumulative effects

Strategic environmental assessments serve to:

- guide development within sustainable limits
- conduct policy, plan and program evaluations that adopt an integrated view of biophysical, social and economic issues
- challenge preconceived ideas and conventional wisdom
- offer a proactive management instrument

Within a mining context, this translates to achieving the following goals:

- establishing appropriate institutional and organizational frameworks
- refining policies, plans and programs to make their consequences more sustainable
- improving links between policies/programs and actions designed to help the poor
- building understanding and capacity in SEA techniques

This approach makes it possible to tackle challenges in terms of spacial, sectoral and governance issues as well as environmental, social welfare, and sustainability concerns. The principles of SEA further call on improved policy making and planning that involves key stakeholders, encourages public involvement, features built-in independent quality assurance, fosters transparency and publishes results, is cost effective, encourages follow up reviews, and builds capacity.

### ***Clustering for Success:***

The Role of Communities and Small Scale Mining in African Integrated Development

Petrus Fusi, GM, Mineral Policy & Sustainable Development  
Mintek, South Africa

*Note: This presentation has an exclusively African focus and is not intended to be representative of conditions or issues beyond the continent.*

Africa's rich, diverse mineral resource base has the potential to serve as the platform for resource-based industrial development and, looking to the longer term, a competitive platform for finished products and resource-based capital goods and services. The challenge is to ensure responsible development, decrease economic losses and treat the environment with greater care.

Meeting this challenge will require a \$4 billion/year investment in transportation infrastructure (roads, railways, air and maritime) along with additional infrastructure build-up necessary to meet the Millennium Development Goals. Improved utilization of new and existing infrastructure will further enhance Africa's ability to compete. Infrastructure for its own sake will get you nowhere; it must be developed as a tool for unlocking the potential for additional economic activity and growth, and it must bring the needs of all users into consideration. Moreover, it must be undertaken with a complete commitment to completing the project. If you build a rail line, you can't do it in bits and pieces.

A cluster is defined as "a geographical concentration of interrelated enterprises that produce a similar range of goods and thereby face similar threats and opportunities." Clustering offers a powerful framework for regional economic development; captures economic relationships among specific industry subsectors; and enhances the local economic environment, which in turn creates linkages. It plays a role in eliminating "enclave" development, a goal that CASM's participation can help to support in the interest of creating sustainable opportunities for the masses, thereby eradicating poverty.

### ***Strategies for improving the management of natural resources and poverty reduction***

Professor Chris Squire, Director  
National Commission for Environment and Forestry, Freetown, Sierra Leone

Sierra Leone is well endowed with mineral resources, many of which have not undergone any serious exploration or mining. The mining sector contributed 20% of GDP and 90% of registered exports through most of the 1990s, when mining and quarrying provided livelihoods for approximately 250,000 people (14% of the total labor force) either directly or indirectly. Although the country's mining sector is modest, its structure is complex relative to that of some other countries with successful mining sectors.

Artisanal (manual), small- to medium-scale mechanized, and large-scale diamond mining all are present in the country, but artisanal and small-scale mining are considerably more extensive than medium- or large-scale mining. The government's Core Mineral Policy is focused on artisanal and small-scale mining in an effort to improve individual and community standards of living by:

- Modernizing mineral rights licensing on a first come, first served basis through a rapid, transparent processing system supported by monitoring, administration and enforcement of rights;
- Facilitating mechanization by establishing a credit or revolving fund scheme for the purchase or rental of equipment to end current financing arrangements, which have prolonged the poverty cycle;
- Assisting miners in selecting the best areas to mine within their concessions, planning mining activities, processing ores, and ensuring sound environmental and safety conditions; and
- Converting the diamond industry from one associated with conflict and desperation to one identified with peace and prosperity.

Mechanisms for achieving these objectives include:

- Restricting alluvial mining to Sierra Leonean citizens, cooperatives and corporate bodies, although provisions are being considered to permit joint venture partnerships through which non-citizens could invest limited capital;
- Encouraging private funding of basic equipment and machinery at affordable prices and on reasonable terms;
- Restrict the movement of non-citizen dealers and exporters, who also would be required to train citizens as diamond valuers;
- Strengthen monitoring by offering incentives to informants who make it possible to apprehend smugglers and confiscate their goods; and
- Encourage the establishment of diamond cutting and polishing factories to add more value to exported goods and increase the revenue they generate.

Other concerns being addressed by the government include regulation of child labor; improved disaster preparedness; assignment of ownership rights and responsibilities to community groups of both genders; land degradation and its economic, social and environmental causes; improved sanitation and disease prevention; cooperation with international initiatives such as the Kimberly Process; and participation in multilateral environmental agreements.

As in all countries, Sierra Leone must do more than adopt theoretical policies; it must align those policies with on the ground realities within the sector. Similarly, it must ensure that it integrates the international conventions it adopts into the national dynamic; failure to do so would merely raise false hopes.

### ***Strategies for improving the management of natural resources and poverty reduction***

Gary McMahon

Consultant to the World Bank and the Global Development Network

Garry McMahon built upon the presentation of Peter Nelson and emphasizes on the challenges for SEA. The fragmented institutional roles and mandates between mining, environmental, financial, legal and social sectors, the socialization of negative impacts and costs of mining activities at the local level, the high capacity requirements, and weak institutions favor the implementation of SEA. He underlines the need of a comprehensive institutional analysis and a strong stakeholder participation leading to a trilateral dialog: government, industry and communities, aiming at outbalancing costs and benefits of mining and considering local interests, such as artisanal mining. He provides an example from the Sierra Leone mining SEA pilot, where local stakeholders have been involved right from the beginning and each step of the process has been validated by local and regional actors. He concludes that the evolution and functioning of institutions can not be neglected. Environmental solutions must be socially sustainable and social solutions must be environmentally sustainable. The most state-of-the-art policy and institutional reforms may have perverse effects due to weak implementation or interest group capture.

## **Session Four: Country Experiences; A selective review of worldwide country experiences focusing on the management of ASM**

### ***Global Overview of ASM***

Kevin d'Souza, Director

Wardell Armstrong, Stoke, United Kingdom and CASM SMAG

The ASM development dream draws on a vision of ASM's potential to contribute to development processes within sustainable communities, evolve in alignment with the Millennium Development Goals, and be mainstreamed into national development and poverty reduction strategies. This view envisions an ASM that co-exists with the private large scale mining sector, achieves gender mainstreaming, and reduces child labor by implementing viable alternatives. It further foresees an ASM that avoids or mitigates negative environmental, social, and human health impacts; encourages equitable markets for mining products and access to fair credit; and leverages the collective capacity of miners to contribute to sustainable development and the implementation of good practices.

This dream is countered by a reality dominated by a plethora of dead paper policy and grandiose declarations alongside ad hoc, single issue donor projects with little coordination. The ASM assistance reality suffers from research fatigue and a seeming inability to move from repetitive academic research to pragmatic, tangible, demand led on the ground action.

The sector is in need of realistic, pragmatic approaches that offer impoverished mining communities a combination of immediate impact and long term sustainability with carryover benefits to other stakeholders.

CASM's role in bridging the gap between the ASM reality and the ASM dream has been underestimated. In addition to its role in fostering global exchanges of knowledge and experience, it has helped formulate and implement some of the ASM components of recent ASM projects by providing support, toolkits and technical expertise.

The question is, what are these projects accomplishing? Are they giving lip service to concerns, or are they really making progress? CASM's successes must be promoted so that ASM initiatives gain more attention and what's working is put into more widespread practice on the ground. The goal must be not only to meet and study, but to answer the most pressing question of all: how are we really going to make a difference with the resources we have?



## ***ASM experiences Asia—case study, Mongolia***

Dr. Chuluunbaatar Enkhzaya, Advisor to the Chairman  
Mineral Resources and Petroleum Authority, Mongolia

Located in Northeast Asia, Mongolia is a landlocked country of 1,564,116 square kilometers that is home to 2.6 million people who speak Mongolian and have a 96% literacy rate. Chief drivers of the country's economy are agriculture, tourism, service, and a growing mineral sector that includes artisanal and small-scale mining. In 2005, the GDP was US \$650 per capita; mining as a percentage of GDP grew during 2002-2005 from 10.1% to 112.7%, 17.3% and 18.0%, respectively. Coal, copper and gold deposits are fueling the growth of the sector, which is just getting started.

Mongolia's goal is to optimize sustainable benefits of sector development. The Mineral Resources and Petroleum Authority of Mongolia is the government agency responsible for geology mining and petroleum oversight. To date, there are five offices within the agency: Geological Survey, Mining Office, Cadastre Office, Petroleum Exploration Office, and Petroleum Production Office.

Informal ASM employs approximately 100,000 miners in 18 of the country's 21 provinces. It is recognized both for creating employment, increasing income and supporting local economies and, on the other hand, exacerbating such problems as child labor, health and safety concerns, negative environmental impacts, and criminality.

The government is taking ASM seriously as a subsector. It is actively engaged in determining how much opportunity ASM can create and how to realize that opportunity. It is in the process of developing a comprehensive strategy within the national development strategy and included ASM in the public discussions held during the May, 2006 National Forum on Mining, Regulation and Environment. The government's vision is for Mongolia to engage in controlled utilization of common resources for sustainable development that promotes pro-poor economic growth, and it sees the evolution of ASM into new small- and medium-sized enterprises as one realistic strategy for economic diversification.

Issues to be confronted in achieving these goals range from artisanal and small-scale miners' impact on pastoral lands on which nomadic people depend to the question of how to engage all stakeholders. Value-added commercialization that can create sustainable income and adherence to good governance standards are also issues to be addressed. In pursuit of these objectives, Mongolia has targeted the creation of a transparent, straightforward policy and regulatory framework and profitable, responsible mining and extended business activities. To that end, the Mongolian delegation is pleased to have the opportunity to participate in the CASM conference, draw on global experiences, and participate in sharing knowledge and ideas.

## ***ASM in India***

Professor Mihir Deb  
University of Delhi, India

ASM in India suffers from definitional confusion, as the term is applied to a wide range of mining practices that include operations of varying sizes and levels of legality. The government has not made any official acknowledgement of ASM's existence within either the National Mineral Policy or the Mines & Minerals Regulation & Development Act. The latter empowers state governments to frame their own rules for minor mineral mining activities; "minor minerals" include building stones, gravel, clay and sand.

There is a need to establish a definitional distinction between ASM and SSM in India. Miners engaged in SSM have some mining rights under some statutory control, though they also engage in the activity illegally in collusion with local officials. SSM is characterized by organized operations, and there is minimal data available about it. Conversely, ASM is carried out by indigenous communities, for the most part in remote areas and on/from common lands. It is wholly unauthorized, unorganized, not legal, and lacking in quantitative data. This is true despite the facts that Indian ASM dates to 400 BC and that all tin production in the country originates in ASM. By conservative estimate, ASM employs 3 million people in the country.

Social concerns related to ASM in India include lack of benefits, social security, education/training and health care; occupational health hazards; variability and volatility of income; and lack of legal status, organization and voice. Women occupy various roles in the ASM process and may hold between 10% and 50% of any given job; most come from poor, indigenous or marginal ethnic communities. They receive lower compensation than men do; face serious hazards that at times may affect their reproductive health; endure sexual exploitation; and are engaged only as casual or contract workers, never as long-term wage earners.

Immediate needs for the sector in India include establishment of a clear-cut definition of and distinction between ASM and SSM; legal status for ASM; development of a national database, monitoring and regulation of ASM activities; and provision of education, health care and marketing facility to ASM workers.

## ***ASM experiences, Peru***

Zoila Martínez Castilla  
Representative EKAMOLLE

Manuel Reinoso  
Presidente AMASUC

Artisanal and small scale mining in Latinamerica is a social answer to unemployment and macro-economic adjustment policies. In Peru, four artisanal mining centres are

presented: La Libertad along the northern coast line, Sur Medio along the southern slopes of the Andes, Puno in the highlands near the Titicaca Lake and Madre de Dios at the northeastern slopes of the Andes towards the Amazon.

Two important factors influence the Peruvian ASM sector: on one hand the growing number of artisanal miners as a consequence of poverty in Peru and – on the other hand - a steady formalization with the formation of companies, cooperatives, associations under the new and favouring law for the legalization of ASM. Missing technology, limited market access for the products and missing access to finance are seen as the key problems of the sector.

The integration of normalized ASM into fair trade systems and the constant support to optimize environmental performance, i.e. by the installation of community retorts, are seen as viable solutions for the typical problems of the miners.

AMASUC as an organisation of the artisanal miners in Southern peru is dedicated to develop the standard zero for the fair trade and to act as multiplier for social, environmental and technical knowhow to their members.

### ***ASM experiences in Eastern Africa***

Ketema Tadesse, Director General

Southern and Eastern African Mineral Center (SEAMIC), Tanzania

Established in 1977, SEAMIC is an independent regional center of knowledge and information on mineral resources in the region. Its Geo-information department and Laboratory offer ISO9001:2000 certified services in training and consultancy; analytical services; mineral processing and applications; gem trading and certification; and geo-information.

Founding member states are Ethiopia, Mozambique and Tanzania; these later were joined by Angola, the Comoros, Kenya and Uganda.

In keeping with its mission “to promote socio-economic and environmentally responsible mineral development in eastern and southern Africa,” SEAMIC seeks to:

- provide specialized services for the mineral industries and overall sector development;
- facilitate access to mineral resources development support services;
- establish sub-regional networks of programs and services;
- encourage regional collaboration;
- promote indigenous mineral based industrialization;
- foster awareness of the sector’s potential to contribute to economic and social development;

- promote responsible investment and free flow of capital, labor, goods and services for mining sector development;
- facilitate the promotion of mining prospects with the highest potential for economic and social impact; and
- facilitate the harmonization of the mineral sector's policies and legislation

SEAMIC is financed by member states' annual contributions, donor funding, and income generated by its services and products.

### ***ASM experiences—case study, West Africa***

#### **Burkina Faso and Ghana**

Jo Bayah, Director of Projects  
Geoman Consult, Accra, Ghana

ASM and SSM were legalized by Ghana in 1989 and since that time have received some assistance, including a UNIDO-supported mercury abatement project and a pilot scheme for equipment hire. Both projects have had limited impact to date.

In 1993, Ghana's Economic Recovery Program's priorities included strengthening the mining sector and modifying laws by way of the establishment of the Minerals Commission.

Beginning in 1995 and with the support of the World Bank, the Mining Sector Development and Environment Project has:

- Completed a new code that revamps the regulatory framework for ASM and SSM;
- Pursued ongoing collection of geological information to assist ASM and SSM;
- Conducted pilot testing of suitable SSM equipment, a project that has had widespread impact but now has been hijacked by Chinese entrepreneurs; and
- Demonstrated reclamation and rehabilitation measures, an effort that to date has had limited impact.

In addition, beginning in the early 2000s, large mines began to implement corporate responsibility programs, which sparked the growth of alternative livelihood programs. This focus continues today. Other areas of ongoing work include demarcation of areas for SSM; study of abandoned sites for exploration programs; training to promote heightened awareness/sensitivity; and improved community relations in respond to increased demands for an equitable share of benefits.

In Burkina Faso, the World Bank-supported Mining Sector Capacity Project studied socio-economic, geological and environmental issues related to SSM as a first step toward developing extension services strategies. The project also encompassed financing mechanism assessments, awareness/sensitization campaigns in SSM

communities, and efforts to acquire appropriate local equipment. These initiatives have yielded results in the form of acquisition of equipment that has improved results at eight sites and successful financing of eight projects; sustainability remains a challenge owing to lack of resources and guidance.

We learn from these experiences that reform is possible but will not accomplish anything without the involvement of the communities to be affected, and community involvement is achieved through the establishment of trust vehicles. Another important lesson concerns timeframes: those that are too short fail to achieve sustainability. Similarly, capacity-building efforts must be broad-based and multidisciplinary in order to cover all aspects of rural livelihoods.

### **Alternative Community Livelihood Program—case study, Ghana**

Mary Ankomahg Boakye Boateng  
Golden Star Oil Palm Plantations Ltd, Accra, Ghana

Golden Star's corporate responsibility approach has led the company to develop many projects around operating mines. Its areas of concern and focus include health, education, sanitation and water as well as development of alternative livelihood projects. These include an oil palm out-grower scheme, a fish farming project, and a sericulture project, all launched in 2003, and a poultry project that began in 2005.

The lesson learned to date from these initiatives is that projects need to be built on a simple model that leverages the stakeholders' skills. The objective is twofold: first, to contribute to poverty reduction by providing stakeholders with continuing employment and regular income, and second, to provide an end-land use for tailings disposal facilities.

The oil palm out-grower scheme has pledged 20,000 hectares in total and to date has leased 8500 hectares, with another 400 hectares cleared in 2006. Achievements to date include 400 hectares on which oil palms already have been planted and 200,000 oil palm seedlings started in a nursery. To date, the project has provided employment to 313 people who earn, on average, a daily wage of \$5.65. Thus, the project is on track to successfully launch an alternative livelihood project developed in partnership with mining companies.

### ***ASM experiences—case study, Central Africa***

Leonard Kalindekafe, Director  
Geological Surveys, Malawi

We tend to think of mining as something that happens "over there." We need to remember that its impact is more widespread and is not confined to the communities in which mining takes place.

An equally critical issue is that of lack of skilled personnel. There is a tremendous need for more trained mining engineers. As part of a strategy for attracting more talent to the sector, it's important to communicate that this is a lucrative field.

Finally, it is essential that we remember that you cannot have a successful mining operation in a sea of poverty. We need to look for workable alternatives that will allow us to resolve conflicts and create opportunity.

## ***Mozambique***

Fatimah Momade

Geologist at the Ministry of Mineral Resources Mozambique

Mozambique is a country that has attracted many investor due to the favorable geological and legal conditions. At the same time the country hosts a vibrant ASM sector: ASM mine gold and gemstones, and also progressively, sand, limestone, gravel, clay and tantalite. The miners are mainly men. 30% are women and children, which perform activities such as transport, wash and panning of ore.

The key challenges for the ASM management in Mozambique are overcoming the informality, mitigating the environmental damage to soil, landscape and water, strengthening business and professional capacities and access fair markets. The Government already advanced with the establishment of a Mining Fund (Fundo de Fomento Mineiro), which buys the gold production from ASM at the market price, competing with other buyers.

The Government recognizes the sector for generating rural employment, contributing towards poverty alleviation, discovering new deposits and exploiting marginal deposits as well as diversifying the economic activities of Mozambique.

Within the newly established legal framework the Government designated 48 areas exclusively for ASM, promotes the formation of ASM association facilitating access to technical, financial, and social assistance and establishes community processing centers in the main ASM to promote best practices and minimize the environmental degradation.

The approach showed a number of positive results: The reduction of occupational health impacts, reduction of environmental impacts, increase in tax revenue, productivity and increase to 2 – 3% the contribution of the sector in the GDP. At the same time the Government pays special attention to women in mining by providing them with adequate technical training for the value addition of their products, mainly the sewing and varnishing of pottery.

Furthermore Mrs. Fatimah Momade campaigns for attracting the next African CASM ACC to Mozambique as an multifacetic and interesting ASM country.

## **Session Five, Part 1: International and Regional Initiatives; A selective review of progress made in some international initiatives with which CASM works**

### ***The Kimberley Process and the Diamond Development Initiative***

Andrew Bone  
DeBeers, London, UK

Conflict diamonds are rough diamonds used by rebels to finance armed conflict whose aim is to undermine legitimate governments. Some of the countries most affected by the practice at its height, such as Angola, the Democratic Republic of Congo, and Sierra Leone, are now in the process of post-conflict development.

The Kimberly Process Certification Scheme imposes extensive, legally binding requirements on its 71 participant countries—who trade approximately 99.8% of the global production of rough diamond—to certify that their shipments free of conflict.

The Diamond Development Initiative was launched to complement the Kimberley Process. Its mission is: “To gather all interested parties into a process that will address, in a comprehensive way, the political, social and economic challenges facing the artisanal diamond mining sector in order to optimize the beneficial development impact of artisanal diamond mining to miners and their communities within the countries in which the diamonds are mined.” Within this context, it seeks to create solutions in such areas as government regulations, development (with a focus on alternative livelihoods), accessible distribution and marketing channels, and organizational advances in ASM communities. It is seeking additional partners.

By virtue of the nature of the product, conflict diamonds have a higher profile than other products—from oil to timber—that also fund conflict. For this reason, DeBeers recognized the need to launch the initiative. However, responsibility for the problem does not rest exclusively on the company’s shoulders. Governments, the private sector, aid agencies and both local and international NGOs must participate in the process. DeBeers is not an expert in ASM; it invites CASM participants to join the project so that it can benefit from the broadest possible range of experience and knowledge.

### ***The Mwadui Community Development Initiative, Tanzania: the Diamond Development Initiative in Action***

Wilson Mutagwaba  
Mwadui Project, Dar es Salaam, Tanzania

The 65-year-old Williamson diamond mine is 75% owned by DeBeers; the remaining 25% is owned by the government of Tanzania. This project at the mine was undertaken by DeBeers in partnership with the government. Its goals are to contribute to alleviating poverty and accelerating socio-economic development and to formalize, transform and support artisanal and small-scale mining in the country's Shinyanga Region through a multi-stakeholder partnership.

The Mwadui Community Development Initiative takes a holistic, multi-sectoral approach to diamond ASM that encompasses social, economic, environmental and policy considerations. It embraces a participatory philosophy that is inclusive of stakeholders and requires commitment from the government in the interest of reducing poverty and making progress toward ownership, empowerment, training, capacity building, organization and corporate social responsibility.

The methodology used in the Williamson project began with a rapid (two-week) appraisal followed by a two-month diagnostic study that examined relationships between miners and the local community; existing government initiatives in support of diamond ASM development; the extent of mining and ancillary activities; and existing funding and other initiatives within and beyond Tanzania. It conducted socio-economic and alternative livelihoods surveys as well as a census and facilities mapping within the township.

Among the issues that emerged was that of miner earnings. Miners can earn 6-10% of a diamond's value. Owing to their lack of access to finance and adequate technology, they are ill-equipped to value the diamonds; as a result, financiers, brokers and dealers realize the lion's share of profits.

However, there is a big market for diamonds of less than one carat, so there is a potentially great opportunity for ASM miners who find smaller stones. Moving toward realizing that potential will require government policies that promote societies and associations for local organization; micro-credit facilities; collaboration with local programs that address health, social welfare, gender equity and other ASM-related concerns; and miners' willingness to practice "clean" mining.

The way forward will involve the creation of programs for social development within the context of multi-stakeholder partnership. This will include engaging in negotiations with LSM to designate ASM areas and building models for the legalization and formalization of ASM. Women's empowerment and the practice of child labor also must be addressed. Finally, prospective solutions must also examine options for alternative livelihoods both within and outside the agricultural sector.

### ***Putting the Kimberley process to the test: Congo (Brazzaville) experiences***

Milandou Barthelmy, Director General of Mines  
Democratic Republic of Congo



The 2004 law on mining recognizes ASM as an element of the strategy for alleviating poverty. The government mining department has been restructured to recognize and incorporate ASM.

The country is concerned about artisanal and small-scale miners' living conditions. Immediate action is needed to improve the miners' quality of life, but steps being taken to complete these actions are at the beginning stages. The country is considering training options based on the Madagascar model and believes the initiatives it undertakes will be enriched by the experience and knowledge gained at the CASM conference.

### ***PACT's work in the Democratic Republic of the Congo***

Karen Hayes, Director  
PACT, Kinshasa and Washington, DC

PACT is a Washington, DC-based international NGO that operates in 18 countries and focuses on social development that evolves out of community participation and capacity building. The program in the DRC was launched in 2003 to address the challenges of agricultural extension and market access, prevention of child abandonment, women's literacy and savings, and small business development. The women's savings program is notable for its role in improving women's financial management to the extent that they were able to start a small business.

Another success, achieved in collaboration with the World Bank, has been a program that to date has provided employment for 2,000 of 10,000 workers laid off in the Gecamines restructuring. The program launched an incubation center at which laid off workers could participate in business training, skills development, and mastery of appropriate technology.

It is estimated that there are 20,000 creuseurs in Kolwezi and perhaps 100,000 in Katanga. Highly migratory, they move between concessions, and in a rush, their presence can rise dramatically overnight. PACT's interventions on their behalf since September, 2006 have utilized an integrated approach that gives equal weight to security and development, which the organization views as inseparable.

Building on its past success, PACT recruited 500 women from among the creuseurs and negociants for participation in literacy and savings training as well as small business startups. Of these, 240 creuseurs were enrolled in apprenticeships for which financial assistance was provided. It is important to remember that they were engaged in digging for lack of employment alternatives. Thus, the success of the transition livelihood programs depends in part on offering financial incentives to the miners, because they need to be confident in their belief that the alternative employment being offered is viable.

Another element that requires careful consideration is how to ensure that a development initiative that removes 1000 people from artisanal mining does not simply create a vacuum that another 1000 will fill. At the same time, we need to be realistic about how many jobs will be created and what skills they will require.

To create sustainable development that contributes to poverty reduction, we must think collaboratively about market opportunities, which types of infrastructure and development will serve development, and how initiatives will promote real solutions. And even as we devise strategies for helping some workers to find alternative employment, we must recognize that ASM will continue and that its workers need protection, security, and ongoing assistance. Finally, it is important to note that PACT's projects involve real small business opportunities, not disguised handouts.

### ***The relevance of the Extractive Industries Transparency Initiative to ASM***

Daniel Graymore

Department for International Development, UK and EITI Secretariat

The Extractive Industries Transparency Initiative was launched at the World Summit on Sustainable Development in Johannesburg in 2002 and is being implemented by some two dozen countries. (Madagascar is a recent signatory.)

A collaborative effort of governments, the private sector, NGOs and international institutions, the EITI seeks to resolve the overlaying problems of poverty, conflict and corruption. It creates transparency in the flow of money from oil, gas and mining companies to the governments of the countries in which they operate. The objective is to increase accountability and ensure that natural resource wealth is a blessing, not a curse. Countries that are poor in natural resources often grow faster than those that are rich in natural resources, but it doesn't have to be that way.

EITI criteria call for:

- Disclosure of payments made by companies and revenue received by governments
- Data audited to international standards
- Independent "reconcilers"
- Universal coverage of companies
- Participation of civil society in the process
- All activity underpinned by a costed workplan

Nigeria, among EITI's first signatories, produced a report that surpassed these criteria. It showed a \$100 million discrepancy between what companies said they paid the government and what the government said it had received. This illustrates the scope of the problem and the urgency with which it needs to be addressed.

EITI has had a slower start in the mining sector than in oil and gas, but it is accelerating under the umbrellas of a broader good governance agenda and initiatives to promote sustainable development. Mining generally produces smaller revenue flows than oil and gas, but at the local level, its footprint is more significant.

Although usually conducted on a national scale, EITI could work for ASM as part of a platform of broader reform that would encompass the state's interaction with ASM on such matters as licenses, taxes, and export revenue. As sustainable development is the primary concern in ASM, EITI is looking to link that more closely to good governance and transparency.

Looking to the future, EITI is considering expansion from revenue capture into oversight of revenue reinvestment in local communities.

### ***Natural resources assessment and management in post conflict environments***

Grant Wroe-Street

United Nations Environment Program, Geneva, Switzerland

It's difficult to prioritize biodiversity when people are going through conflict. Moreover, post-conflict, vulnerable communities continue to be affected disproportionately, as former combatants, lacking employment alternatives, turn to ASM. (It is interesting to note that worldwide, the estimated ASM population is roughly equivalent to the population of internally displaced persons.)

Analysis shows that the conflict in Angola lasted as long as it did because the government had funding from oil and the rebels had funding from diamonds. This illustrates the link that exists between natural resources and conflict and, by extension, the disruptions conflict causes to health, livelihoods, and ecosystems. And yet environmental issues still are not mainstreamed within overall reconstruction or development planning, and the links among environmental management, poverty alleviation and sustainable development are not well understood.

Managing solutions must begin with recognition of the scope of the problem. EIA is a long-established management tool with well-defined components and sectoral guidelines. It's easy to legislate, but the drawback is that it's more difficult to implement. SEA, the newer tool, can look at multiple projects to incorporate development and environmental strategies and is more oriented toward work on the ground; it's not just another means of creating a plan that's oriented more toward working on paper than in practice. However, either approach can be undermined by inadequate institutional capacity, operational budgets, field level presence and budget allocations.

Post-conflict assessments offer the following possible lessons:

- Initiatives require flexibility in project design and funding delivery as well as incorporation of local knowledge.
- As administrative reforms are set in motion during periods of post-conflict reconstruction, there's an opportunity to address chronic, long-standing environmental challenges.
- Resource management reforms must be linked to, and are contingent upon, broader reforms in society and governance.
- It is essential to ensure that political agendas and pressures do not overpower technically sound programs.
- Investments in personnel and institutional capacity of national partners contribute to long-term sustainability. Such investments cannot be stolen.

***“Keeping Minors out of Mining”—the ILO program to eradicate hazardous child labor from mining***

Sophie De Coninck  
ILO, Kinshasa, Democratic Republic of Congo

The ILO estimates that there are one million children working in mines, and that number is believed to be on the rise. In ASM, children can be put to work as young as age 3. Some child laborers go to school; others do not. Boys are more likely to be engaged in underground work, whereas girls are more often consigned to providing services to miners, which can mean providing food, cleaning, and also sexual services.

Children are involved in virtually every area of mining in which adults work and face the same risks as adults, but those risks pose even greater dangers to children, whose bodies are still developing and who lack not only adult size and strength, but also the adult judgment necessary to avoid danger.

Mining and quarrying meet the definition of “worst forms of child labor” adopted in ILO Convention No. 182: “work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety and morals of children.” The ILO accords the highest priority to eliminating these “worst forms of child labor,” and the ILO/IPEC, UNICEF, and national and international NGOs have launched isolated initiatives to eradicate these forms of child labor, but their achievements to date have been largely insufficient relative to the scope of the problem.

Minors Out Of Mining is a new ILO global program intended to eliminate child labor in ASM within 10 years. It is designed for collaboration between governments and the formal mining industry, mining trade unions, the ILO and individual participants such as those in attendance at the CASM conference.

As there are relatively few children involved in ASM (as compared with those in agriculture or city trades), this campaign serves as a good pilot on which future campaigns could be modeled. ILO is confident that through this new program, it can

build on its success during the last decade in getting children out of mining and into school. Fifteen countries already have signed an accord to implement the program, and some have even started action.

Continued forward movement on this initiative will require that we present alternatives to child labor in ASM. We can't simply remove children from the mines. We must put them in schools—and to do so, we must recognize that parents likely will need help to put their children in school. Achieving this will require a two-pronged approach. Downstream, the approach involves monitoring children in mining areas and placing those found working in the mines in school or training. This must be accomplished in tandem with initiatives to improve mines and create mining associations. Upstream, we must take action to create a policy environment in which the laws, policies, and industry code of conduct are conducive to regularization of small scale mining operation.

### ***The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development***

Lois Hooge

Natural Resources Canada, Johannesburg contact

The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development was created because mining is confronted with challenges in human rights, the environment, public health, and other areas that can obscure the industry's potential to contribute to countries' sustainable development and growth.

The Forum does not compete with existing regional or other intergovernmental organizations and does not engage in any ASM projects, but it does provide an additional platform through which CASM advances may be promoted.

Outcomes of the Forum's most recent meeting included increased support for geomapping and EIA; recognition of the need for greater integration of social and economic objectives; and a commitment to vigilance regarding unjustified barriers to market access for minerals and metals.

The Forum also established an investment outlook committee and a committee charged with preparing for the 2010-2011 UNCSD meeting by establishing linkages with other parties. The UNCSD meeting is seen as offering the Forum the opportunity to show leadership in enhancing the mining sector's contributions to sustainable development and promoting mining investment as a tool for national development. It also offers another vehicle for communicating progress on issues and influencing global policy debates.

Topics to be addressed by the Forum at its next meeting, scheduled to take place in Moscow during September 2007, include optimizing mining's benefits, good

governance and its relationship to private sector investment decisions, and the community benefits of development.

## **Session Five, Part 2: International and Regional Initiatives; Brief reviews of progress of other initiatives, including sector and commodity specific initiatives**

### ***The ICMM resource endowment study, relevance to ASM***

Paul Holleson

Anglo Gold Ashanti, Johannesburg, South Africa

and International Council on Mining and Minerals, London, UK

The International Council on Mining and Metals (ICMM) is a CEO-led organization through which many of the industry's global leaders, in concert with regional, national and commodity associations, work to build trust and respect by contributing successfully to sustainable development.

ICMM's Resource Endowment Project seeks to address three questions:

- How does the mining sector contribute to national development and poverty reduction?
- What strategies have been effective in managing revenue for sustainable development and poverty reduction?
- How do mining projects contribute to development at national, regional and local levels?

In examining successful case studies in Chile, Ghana, Peru and Tanzania, the ICMM found that all four shared three traits with relation to mining and broader economic recovery. These factors were improved and more reliable mineral legislation; significantly improved macroeconomic management; and improved governance. Its examination of these case studies also yielded the following observations:

- Broad-based income and employment generation is the ideal condition for absorption of mining into the national economy but cannot emerge quickly in economies that formerly were very weak.
- Existing redistributive mechanisms do not appear particularly successful.
- Deepening governance reforms, particularly in public administration, is critical to ensuring more effective absorption of mining activity into inherently local settings.
- Increased fiscal decentralization and empowerment of local and regional authorities often is advisable, but capacity building must occur in tandem.

The organization, which is in the process of establishing an ASM working group, advocates collaborative action, with participation by the private sector, governments, NGOs and donor agencies, to capture the full potential benefits of mineral wealth.

### ***The GEF Global Mercury Project***

Samuel Spiegel  
Coordinator, Policy Development, Canada

The Global Mercury Project is concerned not just with removing mercury from mineral processing, but also with removing social, political, economic and institutional barriers to an improved quality of life for miners. Its objective is to help artisanal and small-scale miners improve their incomes, health, and social structure.

Between 2002 and present the Global Mercury Project has completed, together with ASM communities, sociological and socio-economic assessments, health and environment assessments, local technology and capacity assessments, retrofitting the results into participatory discussions with communities. National legal frameworks and policies have been reviewed in stakeholder workshops.

Trainers were trained (over 180 already certified) in the impact of mercury pollution, its inefficiency in processing, and the positive impact of marketing mercury-free gold. Thus, they learned how phasing out its use is advantageous to ASM workers' health and income.

Education and awareness outreach campaigns were developed to have a presence in print and broadcast media as well as through local theater.

It has been found that local communities have to be the key drivers of change and must be involved right from the beginning. The most effective partners and leaders are NGOs having local ties and ties to mining. They may even include miners within the organization. The Global Mercury Project bears that in mind as it focuses its efforts on training that can raise awareness about the impact of mercury. The government has a key role in providing clear standards on mercury and in removing barriers for cleaner ASM. The policy and governance action framework includes international guidelines, laws, regulations and codes, training and capacity building, national and international mercury trade, ASM sector policy, micro-credit, fair trade issues as well as a global partnership for development.

Examples from Zimbabwe on the mercury management in milling centers and from Indonesia and Sudan on legal proposals are presented.



## ***The Association for Responsible Mining and future collaboration with CASM***

### **1. Cristina Echavarria, Director**

Association for Responsible Mining, Colombia

An outgrowth of the Certified Green Gold program in Colombia, the Association for Responsible Mining (ARM) is an international, multi-institutional organization that works toward responsible mineral production and trade. ARM proposes a process through which key stakeholders can reach agreements to define universal standards and criteria for the certification of responsible, environmentally friendly community mining practices.

ARM's goal is to improve equity, well being and quality of life in mining communities through the implementation of economic incentives that induce more responsible mining practices in terms of the social, economic, labor and environmental performance of ASM.

ARM formed its technical committee in February 2006 and, in the following three months, worked to adapt generic producer standards to the needs and challenges of ASM. Draft standards were finalized in July and will be the subject of public consultation—obtained at local, regional, national and global meetings as well as via the Internet—through January 2007. Concurrent with this process will be studies and visits designed to identify potential pilot sites and teams in Africa and Asia.

ARM recognizes that collaboration with governments, NGOs and miners is critical to success. It has chosen gold for its pilot program and will learn from that program with the aim of expanding its campaign to gemstones.

### **2. Ervin Renterría, Board Member**

Association for Responsible Mining, Colombia

A bottom up approach is critical; ARM, which grew out of the Green Gold project, is a product of local miners' need to organize.

Collaboration must be conducted on the basis of respect for all participants. "This process has allowed a rural peasant like me to attend the CASM conference as an ARM board member. It is important for me to be able to visit other communities so I can grow and participate in the process. For that reason, it is essential to include more miners in events of this nature."

Project proposals must come from within the local communities and not from the outside. Those that originate within are most successful. Therefore, more miners must be included in the dialog and network of other stakeholders. "As a rural peasant

who has the opportunity to interact with government, civil society, and donors, I have more impact on the process. For that reason, it is essential that more miners be brought into the process.”

### ***The industry view of “cradle to grave” jewelry chain***

Santiago Porto, Program Director  
Council for Responsible Jewellery, London, UK

Incorporated as a not-for-profit organization in 2005, the Council promotes a pragmatic approach to continuous improvement, with the understanding that the project will take years to complete. The council's mission is to promote responsible ethical, social and environmental practices throughout the diamond and gold jewelry supply chain, from mine to retail.

It is not intended to function as a communications or “spin” project. Rather, its aim is to create change in each step of the supply chain. Any bad practice anywhere in the supply chain reflects badly on the jewelry industry, so there is an element of proprietary interest in the project in addition to corporate social responsibility motivations.

The key challenges with respect to the members are seen in the supply chain characteristics, individualistic culture within the sector, establishing a pattern of cooperation among competitors. With respect to changing framework conditions, developing ownership, building critical mass while managing anti-trust risk, managing stakeholder engagement, overcoming the multiplicity of competing codes and standards are seen as threats.

## **Session Six: the ACC**

Jon Hobbs, CASM Chairman, presided over this session, at which Gotthard Walser, CASM's Executive Director, presented the CASM Annual Report and Plan as approved by the SMAG.

Brief regional CASM Reports and Plans were then presented.

## **Sessions Seven, Eight and Nine: Thematic Working Groups and Workshop Reports**

During Sessions Seven and Eight, participants listened to background presentations about the following six topics:

### A. During Session Seven:

1. Finding innovative solutions to conflicts and encroachment of ASM into protected and conservation areas.
2. The role of ASM in civil strife and the reconstruction process, with a particular focus on the African Great Lakes Region and West African Experiences.
3. The progress in employing technological innovation to improve the health, safety and environmental performance of ASM.

### B. During Session Eight:

1. Managing the relationship between large-scale mining companies and ASM
2. The establishment of fairer trade and ethical standards and systems for ASM and the need to expand traceability to other commodities beyond diamonds.
3. Addressing gender, human rights and multiculturalism in responsible small scale mining.

After an introductory presentation provided an overview of each topic, participants broke into three groups dedicated to discussing each topic in greater detail. Finally, during Session Nine, each thematic working group made a report to the conference.

The summaries that follow are organized thematically rather than chronologically, with the overview presentation, working group discussions and conclusions reached for each topic presented in a unified report.

### ***Thematic Working Group One: Finding innovative solutions to conflicts and encroachment of ASM into protected and conservation areas***

#### **Introductory presentation:**

Lalalison Razafintsalama, Technical Coordinator  
MEM/PRGM, Madagascar

Conflicts between ASM and conservation areas occur worldwide. To arrive at a solution to this problem, we must begin with a definition of the term “protected area.” The one chosen within which to frame this discussion was selected because it is the most widely accepted definition worldwide: “An area of land and/or sea especially dedicated to protection and maintenance of biological diversity and of natural and

associated cultural values, and managed through legal and other effective means.” This definition is adopted in an effort to protect biodiversity and has recognized status as a consequence of its implementation through formal legislation or informal customary laws in areas such as sacred areas within Madagascar.

Madagascar faces daily questions regarding large scale mining and ASM activities in areas designated for biodiversity protection. There is existing encroachment within protected areas, and that activity is illegal. Moreover, there are conflicts in areas identified as possible future protected biodiversity areas.

In Madagascar, the government’s strengths in confronting the problem include a commitment at the executive level, as demonstrated by the president’s Durban Vision declaration, and future plans for decentralization of multisectoral land-use plans intended to balance mining and biodiversity. Key stakeholders are engaged in ongoing dialog about the topic, and the Ministry of Energy and Mines is committed to formalizing ASM and to respecting biodiversity priority areas.

On the other hand, weaknesses include the need for more extensive commitments to both law enforcement and anti-corruption tools for enforcement agencies; strategies for protecting high-value biodiversity areas from unregulated ASM; the need for increased technical and financial resources as well as capacity at all levels to deal with ASM; and establishment of best practices guidelines for ASM.

### **Breakout Group: Presentation on The Gorilla Organization and The Durban Process**

Kevin d’Souza, Director

Wardell Armstrong, Stoke, United Kingdom and CASM SMAG

(please contact CASM for this synopsis)

### **Breakout Group One Discussion**

Moderator: Lisa Gaylord

Participants raised the following points for discussion:

Governments are slow to respond when there is a rush in a protected area. There is a need to respond more quickly and effectively. One participant noted that the very act of declaring an area protected can backfire, as it raises suspicions about what is being protected and can unintentionally increase interest in the area. A further complication is that the state lacks the capacity and manpower necessary for effective enforcement, with the result that people may be left questioning the government’s seriousness about the law.

The point was raised that governments may be giving the impression of imposing their will after the fact rather than establishing bonds with affected local communities and getting advance buy-in from them. There is a need to be clear about the distinction between a government's imposing its will on the people versus its doing the will of the people. Protection of biodiversity areas needs to be seen as a priority of both the government and the people. All must understand the issues involved, and the process must be participatory and decentralized. If biodiversity protection is not treated as a national issue that involves everyone, it will fail. It must be carried out at the community level and depoliticized.

However, these thoughts were countered by another participant who argued that fighting rushes at the local level does not work: at the mayoral level, government officials are profiting from rushes and have no incentive to end them. For that reason, the suggestion was made to fight rushes at the regional level.

The moderator noted that in Madagascar, efforts to work with large scale mining to incorporate ASM have failed, and the country has been unable to relocate ASM miners to non-protected areas where they could continue mining without causing destruction in protected areas.

Various questions were raised: Is an opportunity to create employment in parks protection? What are the rights of the people at all levels? Can Madagascar afford to put six million hectares under protection if it suffers from economic want? Can it afford not to? As the decision to protect that land has already been made and is in the process of being implemented, it is necessary to move forward from those questions to others: How can you give ASM miners opportunities outside the protected areas? One serious problem in Madagascar is that ASM is dominated by rushes. Can it be more organized outside protected areas?

A participant noted that training ASM miners to gain larger and better profits from their work might contribute to controlling encroachment on protected areas. However, with regard to other forms of employment, there have to be not just alternatives, but very good alternatives. The government of Madagascar has established agricultural areas in which people can settle, but those who are accustomed to working in forest areas are offended by these relocation efforts.

The moderator commented that in Madagascar, the problem is not that the people are unaware of the law. It's that they know the government cannot or will not enforce the law. There have been instances in which people have been told the law at one site and later been seen again at another. The conclusion, then, is that they don't want to work formally and pay taxes, which is why enforcement must be treated more seriously—and must include arrests, if necessary. In addition, there needs to be more of a focus on raising awareness among local authorities, most of whom are not aware of their obligations.

## **Breakout Group One Conclusions and recommendations**

Although the group's discussion focused on the example of Madagascar, it presented its conclusions and recommendations to the CASM conference as applicable on a global scale.

Recommendations for short-term action:

- First response should be effective enforcement in protected areas
- Operationalize the district-level Mining, Water and Forests Commission
- Prepare policies for small-scale mining
- Help Malagasy artisanal miners to identify sustainable and responsible forms of community mining and support ways of controlling illegal activities that create adverse effects on public opinion

Also for the short term, the group asked CASM to conduct a survey among its members to establish:

- Who are the typical small-scale miners?
- What economic drivers encourage illegal working?

The group further asked CASM members to suggest good international case study examples in which conflicts in protected areas were resolved.

Looking to medium- and long-term action, the group recommended the following:

- Employ land-use planning and SEA to reconcile zoning for mining and protected areas
- Develop good practice guidance and advice
- Work to achieve closer cooperation among ministries and between national and local administration in order to reduce conflict between mining and biodiversity (this is not the responsibility of any one ministry, and capacity needs to be strengthened in all areas)
- Set up formal ASM organizations
- Draw small-scale miners into the discussion
- Engage professional miners and their associations in education and awareness-raising

## ***Thematic Working Group Two: The role of ASM in civil strife and the reconstruction process, with a particular focus on the African Great Lakes Region and West African Experiences***

### **Introductory presentation: Karen Hayes**

Miners are easily abused during a war. To illustrate this point, the presentation included photographs of a poor mining village that, despite its extreme poverty, was attacked 29 times; during each attack, every woman in the village was raped. Moreover, peace does not end the exploitation; it simply shifts it to another guise.

It's important to remember that conflict creates local disturbances, not just large-scale disruptions. Complicating matters further is the extent to which ASM miners themselves can cause grave disruptions to communities. Therefore, ground-level security issues are very complex, as are the relationships of all the players involved.

A key role are playing the traders, sponsors or negociants: So far the complexity of negociant-creuseur relationships with aspects of debt bonds, price setting/dictation, taxes, informal security forces has not been sufficiently respected in the design of ASM interventions.

In the course of reconstruction, economic interventions that pay peace dividends are extremely important. It's necessary to ask ourselves whether we are realistic about the economic viability of the alternative employment opportunities we propose.

### **Breakout Group Two Discussion**

Moderator: Gotthard Walser

The group discussed the following economic issues:

- Prevalence of problem of unemployment: people have few alternatives other than mining.
- Alternatives for livelihood are not interesting enough to deter people from mining activities.
- Mining is an easy and rapid source of money; there is great risk that it evolves into organized crime.
- Creuseurs are illegally exploiting concessions already owned by companies: In Ambondromamy, Madagascar 3 to 5 people die every day because of conflicts.
- Poverty is the main reason why people turn to mining activities, which generate money more rapidly.
- Another issue to be addressed is population explosion, which strains already limited resources.
- Lack of capital obliges people to turn mining.
- International conspiracy: sponsoring of conflicts.



The discussion then turned to such social issues as:

- Contribution of high added value of mining in the financing of armed conflicts.
- Problem of ethnicity exacerbates the conflict.
- Lack of education make people vulnerable and reduces access to other activities.
- The issue of security has also been raised: exploitation sites should be protected.

In addition, the conversation touched on environmental issues. Wild exploitation causes damages to the environment, and once exploited, sites are not restored.

Participants shared experiences from several countries:

In Rwanda, groups of five persons can benefit from micro-credits. They co-signed a convention before obtaining the financial support. Some local enterprises offer also micro-finance.

In Burma, creuseurs working illegally on company-owned concessions have been hired by the company as an alternative to seeking manpower elsewhere.

Formalization of miners in Colombia helped them resist uprisings of guerrillas and para-military forces. Through dialogs with militia, mining communities have been able to earn respect.

Publications are an initiative for transparency on technical and legal aspects. Published studies helped people better understand the trade circuit of mining products and formulate projects.

Breakout Group Two

Conclusions and recommendations

Based on its discussion and the experiences and knowledge sharing it facilitated, the group sees opportunities that CASM can help realize by undertaking the following actions:

- Help organize cooperatives.
- Re-establish trust between administration and artisanal and small scale miners.
- Exploit CASM's lobbying potential to demobilize ex-soldiers and place them within formalized organizations. Viable alternatives must be found because ex-soldiers re-integrate into armed forces when they find no satisfactory livelihood.
- Lobby anti-mining NGOs to engage constructively with ASM communities.

- Train miners to improve their capacity and support projects to provide equipment.
- Reorganize the core beneficiaries of mining activities to make ASM professional.
- Encourage actions to increase miners' share in the commercialization of mining products.
- Support association of all actors for transparency.
- Adhere to the Voluntary Principles of Human Rights & Security to prevent resorting to violence in the repression of invasions of creuseurs.
- Support government agencies.
- Explore means of ensuring sustainable peace.
- Support the financing and implementation of projects that fight child labor.
- Improve communication.
- Support actions that help creuseurs gain their freedom from their financiers.

### ***Thematic Working Group Three: The progress in employing technological innovation to improve the health, safety and environmental performance of ASM***

#### **Introductory presentation: Nellie Mutemeri**

Mintek

The presentation first discussed the issue of "What is Technology?"

It is a product of engineering and science, including the knowledge in processes applied to create and operate technological artifacts. It is a lot more than tangible products such as equipments and reagents. With the development to more complex technological problems and solutions, even in artisanal mining, technology is now provided by specialized institutions managing its development, manufacture and operation as well as providing knowledge and know-how. The requirements for not only more efficient but safer, healthier and economically better performing processes added to the complexity and the need of constant technological innovation. The identification and evaluation of deposits, the extraction of ore, its processing, and refining towards the finished product as well as the provision of market access mark the wide range of technological facets. Costs of intellectual property, of the equipment and resistance to implement innovative technology are challenges in providing ASM with appropriate technical means. In addition, the capacity to adopt technology has to be developed.

#### **Breakout Group Three Discussion**

Moderator: Nellie Mutemeri

The discussion began with a review of threats to ASM, including:

- Lack of collectivization and information among groups, associations, communities, Small-Scale Miners (competing interest, withholding vital information)
- Lack of management capabilities
- Basic skills lacking for technology solutions
- Lack of government appropriate solutions and political will
- No direct access to the market; Small-Scale Miners exploited by middlemen

Additional concerns addressed in the conversation included:

- The need to reduce the incidence of HIV/AIDS; benefits of doing so will include not only improved public health but also increased production
- The importance of promoting other gold recovery techniques made available through the Global Mercury Project, such as improved sluices and centrifuges in place of copper plates, as well as the increased availability of gold processing equipment to catch the finest gold lost into tailings
- The need to submit draft mercury legislation that addresses the use of mercury and cyanide
- The value of designing a process (iGoli) that addresses the problems of quality, safety and environment
- The benefits of formalizing ASM and, as a consequence, increasing production and tax revenue
- The value of sponsored training of miners by the EU/EIB for knowledge transfer and mining safety
- In Madagascar, the need for development of adapted equipment such as sluice boxes for efficiency in production and for the establishment of the gemological institute of Madagascar (IGM)
- In Sudan, the need to introduce engineering blueprints for equipments in local production
- In Ghana, the importance of initiatives for jobs creation through vehicles such as the palm oil project
- The value of using centrifugal concentrators in tailings recovery to reduce environmental impact

### **Breakout Group Three: Conclusions and recommendations**

Based on its discussion and the experiences and knowledge sharing it facilitated, the group sees opportunities that CASM can help realize by undertaking the following actions.

1. To promote better and more widely disseminated knowledge:

- Share information through geoscientists without borders
- Work with technology groups (MINTEK – SEAMIC – ITDG [SHAMVA]) to find appropriate approaches at local level
- Share experiences and expertise related to best practices

- Create and contribute to a database that encompasses existing ASM research organizations and experts
  - Adopt the cluster approach
  - Train equipment manufacturers
  - Link to existing entities (such as SME techs) with projects on the ground
2. To pursue more adequate funding in pursuit of objectives:
- Support and encourage what is viable
  - Mineral concentration in grant requests and capital generation
  - Request financial and technical assistance from the World Bank
3. To support training initiatives:
- Support Integrated Resource Management
  - Build knowledge, skills, and awareness
  - Provide training for value added processes
  - Forge links with training institutions
  - Provide appropriate training for gender equity

Finally, to continue serving as a means of international networking among all industry stakeholders and increasing the presence of ASM miners in that network in the interest of giving Small-Scale Miners the opportunity to work together on projects, exchange views and share experiences.

### ***Thematic Working Group Four: Managing the relationship between large scale mining companies and ASM***

#### **Overview presentation:**

Kevin D'Souza, Director

Wardell Armstrong, Stoke, United Kingdom and CASM SMAG

Historically, there has been ongoing conflict between large scale mining companies and ASM miners, who often view mining concessions as encroaching on their traditional land rights. But on the other hand, ASM miners are not always victims. They also have responsibilities, must have buy-in, and must be willing to compromise and collaborate.

Moreover, it's important to remember the distinction between ASM miners, who may have no historical connection to the land on which they're working, and indigenous people whose culture and traditions are tied to that land.

Sweeping generalizations, like the contention that mining rights always are taken from ASM and granted to large scale mining companies, are not workable. Approaches must be tailored to individual scenarios.

What is pragmatic?

What's going to be workable and possible to implement?

We need to get away from feel-good research and dream lists. What, realistically, can we do with our findings?

What is large scale mining's role? How far does corporate social responsibility go?

Must large scale mining companies function as charities?

What about small scale mining? What is its role?

The government, too, must be built into the process. What should its role be? What should it do, and how can it do it?

To explore the answers to these questions, participants in this session shared information based on a series of case studies:

### **Ghana; Tony Aubyn, Head, Corporate Affairs and Social Development**

Gold Fields Ghana

Large scale mining and ASM have an uncomfortable and frequently violent history of conflict that has left no room for discourse and negotiation. Most often, force and enforcement are regarded as the default response to conflicts. Further complicating the issue is a contradiction inherent in the law, which says minerals belong to the government of Ghana, but the land itself belongs to its traditional inhabitants.

Gold Fields Ghana, which operates the Tarkwa and Damang gold mines in Ghana, adopted a "live and let live" approach to engaging and accommodating ASM operators as long as they do not pose an operational threat to the company. Its approach reflects two key principles: recognition of ASM as an important social and economic activity in surrounding communities, and understanding of the mutual benefits it is possible to generate when well-organized ASM operations ensure relatively safe and good mining practices, harmony, reduced suspicions and improved trust.

To put those principles in practice, the company placed an experienced mining engineer at the ASM miners' disposal and provided them, free of charge, with improved tools, such as screen headboards and woollen carpets (to replace wooden sluice boxes and jute sacks), Garret gravity traps, and amalgamated mercury retorts.

The initial impact of this program was to reduce the total number of people engaged in ASM from 740 to 350-400 between 1996 and 1998. At the same time, gold production and yield improved, as were safety and environmental practices. Successes continued: in 2004, 400 galamsey operators were successfully dialogued out from Damang's Tormento lease, and in 2006 600 operators were moved from the Rex concession via dialog and engagement. Some operators have been hired by the

mining company, which also has become more adept at reducing in-migration. The overall environment today is one of greater harmony and peaceful coexistence.

### **AngloGold Ashanti; Charles Loots**

AngloGold frequently operates in remote areas whose villages often predate the establishment of contemporary countries and borders. It is necessary to recognize that there are differences in perceptions of who has the rights to a particular area of land.

The challenges the company has faced with regard to ASM have included:

- Unlawful invasions and theft
- Sabotage of gold quality
- ASM miners have gotten into underground workings and set fires
- AngloGold has been blamed for mercury leaching, but the company does not use mercury-based processes; the damage is caused by ASM practices
- The company is committed to restoring environments to their original state once extraction activities are terminated, but ASM miners have interfered with these efforts

The company's attempts to address these issues and the underlying conflict have included:

- Engaging ASM miners in dialog
- Building capacity to expose ASM miners to institutions that can assist them
- Informing ASM miners about resources available to them, and promoting these via both mainstream media and alternative modes of communication such as street theater
- Sponsoring artisanal mining fairs
- Participating in educational initiatives and follow-up training

The long term operational goals of these initiatives are to:

- Eliminate the presence of anyone in operational areas without management's sanction
- Eradicate third party fatalities
- Address and resolve human rights concerns
- Improve the livelihood options of host communities by supporting and facilitating legal, responsible ASM
- Ensure the health and safety of employees
- Assure undisrupted production

### **Democratic Republic of Congo; Karen Hayes**

The conflict between large scale mining and ASM has emerged only recently and is in its earliest stages. Approximately 30 internationally listed mining companies hold mining titles in the DRC. Of those, two attended the CASM conference. All will have to address ASM issues at some point. Most just don't realize that yet.

However, the potential for conflict exists alongside the potential to take advantage of opportunities. Large scale mining companies must view ASM miners not as threats, but as employees and suppliers. This is not a competitive issue. It is one of shared risks and shared opportunities that can be realized by establishing productive relationships early; matching large scale mining needs with the abilities and resources ASM miners can offer; and taking a collaborative approach to transitioning ASM to a greater role in the national economy.

### **Democratic Republic of Congo; Joseph Mbaya, Security Manager**

Anvil Mining Services, Lubumbashi

If you fight fire with fire, you end up with ashes. We must seek and find better solutions.

Workable strategies include:

- Using registration to limit numbers and in-migration
- Presentation of choices, incentives and motivations
- Provision of employment or alternatives

Four hundred former ASM miners were employed in construction and given follow-up training for skilled posts. For example, ten former gecamines have been contracted to employ 60 creuseurs in making gravel through the use of appropriate technology. This gravel will supply the plant foundation. This project was undertaken in partnership with Pact Congo.

Additional achievements have included:

- Working with SAESSCAM to organize and provide technical support to diggers
- Establishing a Comité des Creuseurs et Negociants
- Signing a Protocole d'Accord
- Providing literacy and savings training to women
- Providing apprenticeships and financial assistance to creuseurs
- Establishing a health clinic

### **Democratic Republic of Congo; Tim Hart, SRK Consulting**

A DRC capacity building workshop conducted in May 2006 offered the following feedback for companies formulating their approach to ASM:

- Develop unique approaches based on frank dialog
- Develop strategies, including negotiation with miners, to preserve peace and order
- Require artisanal miners in concession areas to have contracts
- Disseminate information about employment opportunities to miners and the public
- At the national level, develop a common policy that recognizes regional specificities
- Develop general principles that address environmental impacts, transparency and human rights

### **Breakout Group Four: Conclusions and recommendations**

Based on its discussion and the experiences and knowledge sharing it facilitated, the group believes CASM should lobby companies to:

- Set aside funds for ASM projects
- Incorporate ASM formally into corporate social responsibility policies
- Identify satellite deposits on concessions for ASM (sites not viable for LSM exploitation)
- Collaborate in looking at related resources, including water and energy

The group further recommends that CASM lobby governments and the World Bank to improve legislation on ASM-LSM issues; grant rights to ASM similar to those enjoyed by LSM; and increase land available for LSM.

The group also urged CASM to engage more actors in order to:

- Give miners and traders a stronger voice, possibly through an international forum
- Ensure better representation of indigenous people  
Increase involvement of mine managers and engineers
- Increase LSM companies' involvement in ASM activities
- Engage greater collaboration with National Chambers of Mines
- Encourage John Ruggie/UN to become more involved in ASM

With regard to CASM's own role, the group recommends that it focus on information provision in the following areas:

- Mapping of who is doing what and where
- Disseminating best practice guidelines, including those for governments' response to rushes
- Supporting culture of participatory monitoring
- Organizing activities (such as a conference or forum) in DRC and Ghana to capitalize on the momentum in both countries



- Encouraging greater government participation on panels and in working groups during 2007

***Thematic Working Group Five: The establishment of fairer trade and ethical standards and systems for ASM and the need to expand traceability to other commodities beyond diamonds***

**Introductory Presentation: Fair Trade: An Opportunity for Artisanal and Small Scale miners in the Marketplace**

Speaker & Session Moderator: Christopher Sheldon

Fair trade is one of the fastest growing consumer market segments and worth over \$1.2 billion a year. In Switzerland 47% of bananas and 20% of flowers are fair trade; in the UK 23% of coffee and 5% of tea are fair trade. However, there is currently little to no fair trade precious jewellery. Gold for jewellery is worth around \$40 billion a year internationally and total US jewellery sales alone are worth around \$50 billion a year. If just 1% of gold jewellery sales were fair trade that could be worth \$400 million a year. Could the growing consumer demand for fair trade products present an unprecedented opportunity for artisanal and small scale miners to supply this demand and improve their incomes and quality of life?

Fair trade present a win win win opportunity for ASM miners and communities. Incomes can improve and environmental and social impacts will also improve through the adoption of responsible environmental, social and labour practices.

This Fair Trade session will look at the supply chain for fair trade, present real life examples from pioneers in ASM and fair trade, and provide a forum for discussion for the way forward to open up this opportunity for miners and their communities.

Speakers

- **Patrick Shein:** The Supply Chain for Fair Trade Gold
- **Roberto Sarudiansky:** Artisanal Gold Mining in Northwestern Argentina
- **Greg Valerio:** Fair Trade Jewellery Product and the UK Jeweller Experience

**South Africa: The Kgabane Trust and Interwoven Jewellery**

Speaker: Busi Ntuli

The Kgabane Rural Program is a Program that is championing the development of the indigenous jewellery sector (based on the fusion of ancient craft skills and goldsmithing techniques). It aims to create sustainable livelihoods in rural and poor urban communities, through the inclusion of marginalised in mainstream of the jewellery manufacturing industry thereby contributing to rural income generation. Fair trade principles (fair incomes, respect for the environment, access to markets) are a key element of the Program. So far the skill development component, the assistance

component and the market support component have trained over 500 persons, established 23 enterprises and opened access to national and international marketing of their appreciated products.

While open markets pose a threat to the development of indigenous sectors, Fair Trade initiatives become a key to the livelihoods of poor communities. Role of Fair Trade is to ensure that these industries are not destroyed through unfair competition from economies that utilise unfair labour practices to gain market dominance.

### **Ghana: Fair Trade Gold Mining? A Case Study of New Abirem**

Speakers: Gavin Hilson and Sadia Mohammed:

The Noyem and Nyafoman projects are a gold mining areas in the Eastern region of Ghana. Artisanal miners are supported by the University of Manchester, Newmont Mining, which is operating a large scale operation nearby, the Precious Minerals and Marketing Corporation and the Minerals Commission in order to achieve market access with fair prices, organisation and good governance as well as formalization of their status.

### **Main challenges for ASM in fair trade labeling**

Cristina Echavarria, Association for Responsible Mining (ARM), Medellín, Colombia

Cristina exposed on the experiences of ARM to establish a market-based fair trade system for artisanal gold and precious metals by-products. It bases upon long cooperation with producers in Latin America and workshops with miners and support organizations on the development of fair trade standards. The challenges are seen in the social, economic, labor related and environmental field.

Legalization is seen as a pre-requisite for certification as well as the non-linkage to armed conflicts and illegal activities. The organization of miners and their governance is a key for successful conversion of mineral wealth in better livelihood standards. Governments have important responsibilities to set out an enabling framework.

The application of fair trade premium and its transparent repartition within the producers, the access to legal export markets, not conflicting with local traditional trading arrangements, access to market information and safe logistics for the valuable product to the point of export are important factors for economic success on the producer's side. They shall be accomplished by more efficient mineral concentration, value adding through refinery and marketing of by-products, a vertical integration into economic systems, and a better access to finance.

Related to labor development: decent working standards according to ILO definitions shall be applied to traditional labor arrangements. Gender balance and elimination of

child labor are key issues as well as occupational health and safety and preparedness to emergencies. Access to social security and –especially in Africa- to HIV-AIDS programs have to be considered.

In the environmental perspective the responsible management of toxic substances as well as the application of clean technologies and impact mitigation shall be a pre-requisite to be honored by the fair trade premium.

## Conclusions

The following threats have been identified:

- Not much anthropological data available;
- Risk of funding cuts by intermediaries and alienating Large-Scale Miners (miners-jewelers-customers alliance);
- Monopoly of cartels;
- Deception;
- Lack of information;
- Selfish politics;
- Divide and rule policies;
- Lack of traceability in gold mining;
- Inequitable humanitarian approaches (i.e. food for gold) in some areas;
- Inexistence of legal framework to establish fair trade;
- Lack of organization.

Important lessons learnt exist from the Gold related activities: they have been addressed successfully in Peru, Colombia – Oro Verde, Argentina, South Africa and Brazil

Opportunities:

- Facilitate the link between miners, jewelers and customers;
- Define the real stakeholders;
- Bring Small-Scale Miners together within the legal frame (lobbying);
- Conduct a thorough study of borders circulation of stones (case of DRC);
- Fully involve international organizations like the FLO (Fair trade labeling organization) in SSM;
- Help Artisanal and Small-Scale Miners to set up organizations to establish Fair Trade mechanisms (case of the Central Africa Republic: 2kg of gold declared as annual production when actually it may be fifteen times more);
- Encourage established organizations/lobbies engaged in fair trade;
- Facilitate microcredits;
- Fund meetings between miners for experience sharing;
- Engage key stakeholders in ASM and convince them that they are not under attack (so that they do not withdraw their money);

- Lobby governments to make changes and include LSM and SSM into national and international policies;
- Publish success stories.

Fair Trade creates a powerful story from the miner to the consumer.

Fair Trade acts as Driver and Incentive to undertake many of the activities CASM and those working in ASM aspire to

### ***Thematic Working Group Six: Addressing Gender, Human Rights and Multiculturalism in Responsible Mining***

#### **Breakout Group Six Discussion**

Moderator: Jennifer Hinton

Questions raised about women's status at the household, community and national levels included:

- What are the key problems and constraints that result in gender inequalities at the household level?
- Why are there power imbalances within the household?
- How can a "human rights" approach be used to support gender equity at the household and community levels?
- How might these approaches be different in different cultures?
- What examples are there of positive change toward gender equity? Where has some success been achieved?
- What are the key problems and constraints that result in gender inequalities related to mining?
- What are the key gender inequalities in the mine and community?
- How have policies and practices at a national level hindered the advancement of gender equity?
- How have they addressed issues of culture and its role in gender inequalities?
- Why has progress to support gender mainstreaming in ASM related policies and programs been so slow?

A discussion about the problems women face raised the following points in relation to these questions:

- Cultural and traditional beliefs promote the idea of women's inferiority
- Men think it correct to abuse women, and women share that perception
- Polygamy exists in many mining areas, and girls get married at age 12
- There is no trickle down effects from cities to the rural areas: stones are mined in the rural areas, but money is staying in the towns
- Women work but have no control over the money they earn

- In some countries, women must have their husband's or father's permission to work
- Mining licenses are not issued to women
- Trade unions are not interested in ASM or gender issues
- Women have too many responsibilities but too few resources
- Women take their children to the mines, which increases health hazards
- Organization of women can help create alternative livelihoods
- Female leaders can change cultural beliefs and the way women are seen by communities
- Land ownership by women is an important component of advancing gender equity
- Education also is critically important: women must be educated about their rights. Men should also be educated about women condition's so that they are fully aware of and recognize their contributions
- Women have no rights in mining communities, are paid less than men for equal work, and have restricted or no access to markets located far from the mining areas; unable to travel because of family obligations and security risks, they are in greater danger of being exploited (both sexually and financially by middlemen)
- At the municipal level, ASM is dominated by scientists and technicians who do not concern themselves with how those technologies will affect women.
- There is a lack of social networks and support for women in ASM; organizing women can help improve their bargaining power and knowledge
- Women need improved access to information about market prices, technologies, and lessons learned from other countries; media such as community radio can increase current levels of dissemination of that kind of information
- Access to microcredit financing can help women get involved in other, safer activities
- Governments and companies are promoting a "gender whitewash" that is worsening, not improving, conditions; the gender equity agenda is not moving forward
- Incompetent women are appointed to high positions just to fulfill quotas
- Those who design policies related to gender and mining lack knowledge and understanding of their realities, with the result that the policies lack practical application to women's conditions

### **Breakout Group Six: Conclusions and recommendations**

First, CASM must raise gender awareness within the organization itself, in particular through increased representation of women in the SMAG, whose composition should demonstrate a commitment to gender equity. In addition, assignment of responsibilities within CASM should be more gender balanced.

The group also asked CASM to:

- Maintain a gender desk
- End marginalization of gender issues at the conference via a full plenary session on gender; every conference presentation should consider gender issues
- Alter the format of the conference to include training and use of participatory methods that involve everyone and minimize use of PowerPoint presentations
- Designate a percentage of funding within the budget for the betterment of women
- Increase the visibility of female miners

Within communities, the group offered the following recommendations, broken down by category:

#### Social issues

- Increase women's visibility; develop role models (in CASM, government leaders, miners, trade unions, etc); consider awarding prizes to female miners
- Advocate for outreach to the vulnerable women through work with on-the-ground NGOs
- Advocate for use of rights-based approaches to sensitization of women and men
- Promote women's mining associations and help them to network
- Conduct sensitization and gender training of men: leaders in CASM (including SMAG), miners, policy makers (leaders), and other key persons
- Develop a Gender Toolkit and put an end to gender whitewashing on any ASM projects

#### Health issues

- Draw and study lessons from LSM companies' experience with regard to HIV/AIDS
- Study links between reproductive health and mine work /occupational health and mine work

#### Economic issue

- Support training sessions dedicated to labor saving techniques for women

## Session Ten: Closing Ceremony

- Throughout the conference, a technology fair was held in tents on the grounds of the conference hotel. In the closing ceremony, conference participants were invited to nominate the exhibitors whose projects that most impressed them for two awards of \$1,000 each. One award was to be presented to an exhibitor from Madagascar, and a second was to be presented to an exhibitor from another country.

Following nominations and a discussion by participants, who expressed appreciation and admiration of the projects, the selection of awards was put to a vote with the following results: the foreign award went to the Zimbabwe Panners Association, and the domestic award was divided equally between the exhibitors of lapidary equipment and the exhibitors of a sluice. The winners of the domestic award will receive \$500 each.

- Willem Smuts and Francois Alain Ngobokoto auctioned two paintings: one of children playing a mining game, which sold for €55, and one entitled "The Coming Day," which sold for 70 dollars.
- CASM Chairman Jon Hobbs announced that Irshad Ullah Khan, Chairman, M.E.F.T. Pakistan (Private) Limited and a published poet, has been named CASM Poet Laureate. Mr. Khan remarked on the number of countries represented at the conference, commented that CASM brings people together, and read the following poem, which he wrote in honor of the conference and that sentiment:

### THERE WAS A HUSH

There was a hush  
So silent that you  
Could hear your breath.  
As the music from Madagascar  
Played for all of you  
John Hobbs asked me  
To write a poem that  
Would stay with us.  
So my friends I return  
To the hush of poverty  
And to the silence of eyes  
As quiet as death.

I come to hearts  
That seek a CASMAN  
And you and others  
To help us all  
Reach for the beauty  
And the equality of nature  
That will remove want  
Forever from our world.  
Let our souls hear  
The voices of other people  
Whom no one hears.

- The Mozambique delegation read a statement from the country's Minister of Mineral Resources that extended an official invitation for CASM to hold its 2009 annual meeting, the next to take place in Africa, in Mozambique.

- Catalina Cook and Ervin Renterria presented green gold earrings available for sale.
- Manuel Reinoso, in the name of all Latin American miners, presented a tool that symbolizes artisanal mining to Gotthard Walser to ensure that he always remembers miners in Latin America.
- The Mongolian delegation read a letter from the Mongolian Parliament that extended a formal invitation for CASM to hold its 2007 annual meeting in Mongolia.
- In closing statements, Jon Hobbs stated that CASM gives birth to new ideas and asked that participants recognize and acknowledge the benefits they have received as a result of the CASM Secretariat's work. He cited the contributions of Gotthard Walser, Christopher Sheldon and Veronika Kohler to the conference's success and expressed gratitude to the members of the SMAG, the host country Madagascar and host city Antsirabe, and the local organizing team, Harson Development. He then extended further thanks to all the conference speakers and attendees and commented, "You have helped us take CASM to a new level."
- Gotthard Walser, in closing remarks, reiterated these expressions of thanks in French.
- A message from Madagascar's Minister of Mines was read; it expressed thanks to the conference participants for accepting Madagascar's hospitality and for actively pursuing the opportunity to reduce poverty.
- Certificates of attendance were presented to all conference attendees.



## The side events

### ***The field trips***

Three field trips have been organized for the participants :

1. to the tourmalines of mount Ibiti, where artisanal mine workings occurred over the last 20 years. Tourmaline, morganite and kunzite are found occasionally in the host rock.
2. the Nadihizana pegmatite, about 150 km south of Antsirabe, is as well a tourmaline bearing pegmatite.

The participants on the mine field trips have been able to experience the isolation of Madagascan small scale mining sites and the difficulties in accessing the spots with a vehicle or by foot.

3. After coming back to Antananarivo, interested participants of the CASM have been invited to visit the gemmology and cutting school on the premises of the MEM.

### ***The ARM Public Consultation for Standard Zero on Fair Trade Artisanal Gold and Associated Precious Metals By-Products***

As a pre- CASM Workshop Event ARM held a global consultation workshop at Antsirabe, Madagascar, just before the CASM Annual Event. It was facilitated by Cristina Echavarría from ARM. The workshop was attended by some 50 people from a broad range of African, Asian, European and American countries. They worked in five groups following the organisation of the standards: social, economic, environmental, labour and trader's standards. The final documents are an intermediate step in the development of the Standard Zero on Fair Trade. Unfortunately, due to time constraints, it was not possible to regroup at the end of the day, or to meet further at another time for reporting back in a plenary, to produce a general agreed upon document. The workshop results as well as the further developed standard may be consulted on the internet:

<http://www.communitymining.org/maputo.html#madagascar> and <http://www.communitymining.org/>

## The participants



<b>Argentina</b>		
Sarundiansky, Roberto	Ecoandina Foundation	<a href="mailto:sarudi@fibertel.com.ar">sarudi@fibertel.com.ar</a>
<b>Australia</b>		
Katz, Mike	University of New South Wales	<a href="mailto:M.Katz@unsw.edu.au">M.Katz@unsw.edu.au</a>
Laurence, David	University of New South Wales	<a href="mailto:d.laurence@unsw.edu.au">d.laurence@unsw.edu.au</a>
Lestari, Nina	The Australian National University	<a href="mailto:nina.lestari@anu.edu.au">nina.lestari@anu.edu.au</a>
Ramanie Kunanayagam	ICM/Rio Tinto plc	<a href="mailto:Ramanie.Kunanayagam@Riotinto.co">Ramanie.Kunanayagam@Riotinto.co</a>
<b>Bolivia</b>		
Hentschel, Thomas		<a href="mailto:thomas@medmin.org">thomas@medmin.org</a>
Lafuente, Daniel		<a href="mailto:danlafuar@gmail.com">danlafuar@gmail.com</a>
<b>Brazil</b>		
De Souza, José Maria	Evandro Chagas Institute	<a href="mailto:imsouza@iec.pa.gov.br">imsouza@iec.pa.gov.br</a>
Peiter, Carlos Cesar	Centro de Tecnologia Mineral	<a href="mailto:cpeiter@cetem.gov.br">cpeiter@cetem.gov.br</a>
Pregovich, Bernhard Gregor	NAEA-UFPA	<a href="mailto:bpregovich@lycos.de">bpregovich@lycos.de</a>
<b>Cameroon</b>		
Tetsopgang, Samuel	CREPD	<a href="mailto:tetsopgang@yahoo.com">tetsopgang@yahoo.com</a>
<b>Canada</b>		
Spiegel, Sam	United Nations Industrial Development Organisation	<a href="mailto:samspiegel@gmail.com">samspiegel@gmail.com</a>
<b>Centrafrican Republic</b>		
Ngbokoto, Francois Alain	Minings, Energy and Hydraulics Ministry	<a href="mailto:fa.ngbokoto@yahoo.fr">fa.ngbokoto@yahoo.fr</a>
<b>China</b>		
Shen, Lei	Chinese Academy of Sciences	<a href="mailto:shenl@ignrr.ac.cn">shenl@ignrr.ac.cn</a>
<b>Colombia</b>		
Cock, Catalina	Association for Responsible Mining (ARM)	<a href="mailto:catalinacock@gmail.com">catalinacock@gmail.com</a>
Echavarría, Cristina		<a href="mailto:arm@communitymining.org">arm@communitymining.org</a>
Rentería, Ervin	Major Community Council of Condoto	<a href="mailto:ervinastiv@yahoo.es">ervinastiv@yahoo.es</a>
<b>Democratic Republic of Congo</b>		
Baudouin, Itheta	SAESSCAM Ministry of Mines	<a href="mailto:saesscam@yahoo.fr">saesscam@yahoo.fr</a>
Chishugi Kalangiro, Alain	INICA & Durban Process	<a href="mailto:chishugi@yahoo.com">chishugi@yahoo.com</a>
De Coninck, Sophie	ILO	<a href="mailto:deconinck_sophie@yahoo.fr">deconinck_sophie@yahoo.fr</a>
Djama, Louis Marie	Ministères de mines et des industries minières	<a href="mailto:Imdiama@hotmail.com">Imdiama@hotmail.com</a>
Hayes, Karen	Pact Congo	<a href="mailto:congomining@yahoo.co.uk">congomining@yahoo.co.uk</a>
Kamoni, Mokota Lissa		

Lifeta, Willy Bafoa	Ministère de Mines/Gouvernement	
Lubamba Lutoko, Jean Baptiste	CENADEP	<a href="mailto:iblubamba@yahoo.fr">iblubamba@yahoo.fr</a>
Mabolia, Yenga	Ministry of Mines	<a href="mailto:diyenga@yahoo.com">diyenga@yahoo.com</a>
Mbaya, Joseph	Anvil Mining	<a href="mailto:josephm@anvilmining.com">josephm@anvilmining.com</a>
Ntoto Kitenge, Jean	Processus de Kimberley / Ministry of Mines	<a href="mailto:ntotoki@yahoo.com">ntotoki@yahoo.com</a>
Oneshpore Sematumba, Ndagije	Pole Institute	<a href="mailto:osematumba@gmail.com">osematumba@gmail.com</a>
Otschudi, Omanga	Ministère des Mines/Gouvernement	<a href="mailto:ip_otschudiomanga@yahoo.fr">ip_otschudiomanga@yahoo.fr</a>
Tschimena Musampa, Delphin	Banque Mondiale	<a href="mailto:dsthimena@worldbank.org">dsthimena@worldbank.org</a>
Tshimpidimbua, Mujanayi Dieudonné	Groupe d'Appui aux Exploitants des Ressources Naturelles (GAERN)	<a href="mailto:gaernkor@yahoo.fr">gaernkor@yahoo.fr</a>
Tuvididila, Charles Wilson	SAESSCAM/ Ministry of Mines	<a href="mailto:charleswilson@yahoo.fr">charleswilson@yahoo.fr</a>
<b>Denmark</b>		
Appel, Peter	Geological Survey of Denmark and Greenland	<a href="mailto:pa@geus.dk">pa@geus.dk</a>
Tychsen, John	Geological Survey of Denmark and Greenland	<a href="mailto:JT@geus.dk">JT@geus.dk</a>
<b>Ethiopia</b>		
Melka, Hundie		<a href="mailto:hundiem@yahoo.com">hundiem@yahoo.com</a>
Pedro, Antonio	UNECA	<a href="mailto:apedro@uneca.org">apedro@uneca.org</a>
Sisay, Debele	Geological Survey of Ethiopia	<a href="mailto:sisaydebele@yahoo.com">sisaydebele@yahoo.com</a>
Tamrat, Mojo		<a href="mailto:mojo_tamrat@yahoo.com">mojo_tamrat@yahoo.com</a>
Tesfaynesh, Lema		<a href="mailto:tesfas67@yahoo.com">tesfas67@yahoo.com</a>
Tilahun, Gesit	Ministry of Mines and Energy	<a href="mailto:gesite2002@yahoo.com">gesite2002@yahoo.com</a>
<b>France</b>		
Andriamasinoro, Fenintsoa	BRGM	<a href="mailto:f.andriamasinoro@grqm.fr">f.andriamasinoro@grqm.fr</a>
Blinker, Lesley	EC Delegation Barbados	<a href="mailto:LRBlinker@aol.com">LRBlinker@aol.com</a>
Cluzet, Charles		<a href="mailto:c.cluzet@igal.fr">c.cluzet@igal.fr</a>
Damon, Jacqueline	INICA	<a href="mailto:jacqueline-damon@yahoo.fr">jacqueline-damon@yahoo.fr</a>
Eklund, Maria	INICA	<a href="mailto:mariaeeeklund@hotmail.com">mariaeeeklund@hotmail.com</a>
Martel-Jantin, Bruno	BRGM	<a href="mailto:b.martel-jantin@brgm.fr">b.martel-jantin@brgm.fr</a>
Orru, Jean Francois	BRGM	<a href="mailto:jf.orrु@brgm.fr">jf.orrु@brgm.fr</a>
Pelon, Remi	BRGM	<a href="mailto:r.pelon@brgm.fr">r.pelon@brgm.fr</a>
Schein, Patrick	S&P Trading	<a href="mailto:schein.patrick@gmail.com">schein.patrick@gmail.com</a>
<b>Germany</b>		
Priester, Michael	Projekt-Consult GmbH	<a href="mailto:michael.priester@projekt-consult.de">michael.priester@projekt-consult.de</a>
Seegers, Joe	Projekt-Consult GmbH	<a href="mailto:Heinz-Josef.Seegers@t-online.de">Heinz-Josef.Seegers@t-online.de</a>
Wagner, Markus	German Federal Institute of Geoscience and Natural Resources (BGR)	<a href="mailto:m.wagner@bgr.de">m.wagner@bgr.de</a>
<b>Ghana</b>		
Aryee, Ben	Minerals Commission	<a href="mailto:Benglo59@yahoo.com">Benglo59@yahoo.com</a>
Aubynn, Toni	Gold Fields Ghana	<a href="mailto:aaubynn@abosso.com">aaubynn@abosso.com</a>
Bayah, Jo		<a href="mailto:tems_t@yahoo.com">tems_t@yahoo.com</a>
Boaky Boateng, Mary Ankomah	Golden Star Resources	<a href="mailto:maame35@hotmail.com">maame35@hotmail.com</a>
Kofi Tetteh Orlands	Minerals Commission	<a href="mailto:kotett@yahoo.com">kotett@yahoo.com</a>
Nyame, Frank	University of Ghana, Legon	<a href="mailto:fnnyame@ug.edu.gh">fnnyame@ug.edu.gh</a>
<b>India</b>		
Mihir, Deb	School of Environmental Studies, University of Delhi	<a href="mailto:mihirdeb@gmail.com">mihirdeb@gmail.com</a>
<b>Japan</b>		
Satoshi, Murao	Geological Survey of Japan, AIST	<a href="mailto:s.murao@aist.go.jp">s.murao@aist.go.jp</a>
<b>Kenya</b>		
Kituku, Gregory	Ministry of Environment and Natural Resources (Kenya)	<a href="mailto:gkituku@yahoo.com">gkituku@yahoo.com</a>
<b>Madagascar</b>		
Andriamahefaparany, Olivier Donat	Ministère de l'Energie et des Mines	<a href="mailto:memcab@wanadoo.mg">memcab@wanadoo.mg</a>
Andriamboavonjy, Evah	JARIALA	<a href="mailto:evah@irgld.mg">evah@irgld.mg</a>
Andrianatavy, David		
Andriantseheno, Daniel	Université d'Antananarivo	
Andriatsira, Rakotoarisoa	Président du Comité National des Mines	<a href="mailto:andriatsira@caramail.com">andriatsira@caramail.com</a>
Anselme, Jaoriziky	U.S. Embassy	<a href="mailto:jaorizikya2@state.gov">jaorizikya2@state.gov</a>
Cassim Aurélien Gaustin	Commune Rurale Ifasina I	
Cushman, Tom	IGM	<a href="mailto:tom@tomcushman.com">tom@tomcushman.com</a>
Davidson, Jeanne	Ministère de l'Energie et des Mines	<a href="mailto:memcab@wanadoo.mg">memcab@wanadoo.mg</a>

Drean, Philippe		<a href="mailto:ph.drean@wanadoo.mg">ph.drean@wanadoo.mg</a>
Garemerno, Michèle		<a href="mailto:ph.drean@wanadoo.mg">ph.drean@wanadoo.mg</a>
Gilbert, Sylvie	Ministère de l'Energie et des Mines	<a href="mailto:tmm.bcmm@wanadoo.mg">tmm.bcmm@wanadoo.mg</a>
Larin Guy Philippe	QIT Madagascar Minerals	
Medori, Patrick	Ambassade de France - SCAC	<a href="mailto:patrick.medori@diplomatie.gouv.fr">patrick.medori@diplomatie.gouv.fr</a>
Nicoll, Martin	WWF	<a href="mailto:menicoll@wwf.mg">menicoll@wwf.mg</a>
O'Brian, Gary	QIT Madagascar Minerals	
Puvilland, Pascal	Ministère de l'Energie et des Mines/PRISMM	<a href="mailto:p.puvilland@iris.mg">p.puvilland@iris.mg</a>
Rabary, Richard	Colours of Mines	<a href="mailto:ric_rabary_r@yahoo.fr">ric_rabary_r@yahoo.fr</a>
Rabaja, Grégoire	ONG GREEN	<a href="mailto:onggreen@wanadoo.mg">onggreen@wanadoo.mg</a>
Rafidy, Josielle	Bamex USAID	<a href="mailto:ojr@chemonics.mg">ojr@chemonics.mg</a>
Rahaingoarison, Fanja Nirina	Ministère de l'Energie et des Mines	<a href="mailto:rahaingo_fanja@yahoo.fr">rahaingo_fanja@yahoo.fr</a>
Rajaobelna, Léon	Conservation International	
Rajonson, Hugues	Ministère de l'Energie et des Mines	
Rakotoarinelina, Louis de Gonzague	Association Gares-Mines	
Rakotoary, Jean Chrysostome	Office National pour l'Environnement	<a href="mailto:jcrakoto@pnae.mg">jcrakoto@pnae.mg</a>
Rakotomalala herindrainy Olivier	PAM Madagascar SARL	<a href="mailto:pamm.dt@wanadoo.mg">pamm.dt@wanadoo.mg</a>
Rakotomanana, Dominique	PRGM	<a href="mailto:mem.prsm@wanadoo.mg">mem.prsm@wanadoo.mg</a>
Rakotondrainibe, Simon Richard	IGM	<a href="mailto:simoard05@yahoo.fr">simoard05@yahoo.fr</a>
Rakotoniaina, Patrice	Banque Mondiale	<a href="mailto:prakotoniaina@worldbank.org">prakotoniaina@worldbank.org</a>
Rakotonirina, Georges	Ministère de l'energie et des Mines/ Ministère de l'Energie et des Mines	<a href="mailto:rgeorges27@yahoo.com">rgeorges27@yahoo.com</a>
Rakotonjatovo, Rindra	PAM Madagascar SARL	<a href="mailto:pammsarl@wanadoo.mg">pammsarl@wanadoo.mg</a>
Rakotonomenanahary, Vololona	Ministère de l'Energie et des Mines / PRISMM	<a href="mailto:vololonaprismm@iris.mg">vololonaprismm@iris.mg</a>
Rakotoson, Augustin	OMNIS	<a href="mailto:rakotoauguste@yahoo.fr">rakotoauguste@yahoo.fr</a>
Rakototafika, Gérard	Ministère de l'Energie et des Mines	<a href="mailto:rgerard@freenet.mg">rgerard@freenet.mg</a>
Ramarolahy, Jonasy	PGRM	<a href="mailto:mem.prsm@wanadoo.mg">mem.prsm@wanadoo.mg</a>
Ranaivoarisoa, Gisèle	Institut de Gemmologie d'Antananarivo (annexe Antsirabe)	<a href="mailto:gemmoiga@yahoo.fr">gemmoiga@yahoo.fr</a>
Ranarivao, Mickey	Ministère de l'Energie et des Mines	<a href="mailto:ranarivao-mi@yahoo.fr">ranarivao-mi@yahoo.fr</a>
Randriamiarisoa Onivola	Ministère de l'Energie et des Mines / PRISMM	<a href="mailto:oniquelie@yahoo.fr">oniquelie@yahoo.fr</a>
Randriamihaja, Hoihasina	AGEDI	
Randrianaivo, Roger Henri Marcel	CIREF Fianarantsoa	
Randriananasana, Jochlin	ESPA	
Randrianantoandro, Jean Philippe	Ministère de l'environnement, des Eaux et Forets	
Randrianarison, Justin	Ministère de l'Energie et des Mines	
Randrianja, Roger	Ecole Supérieure Polytechnique d'Antananarivo	<a href="mailto:roger_ral@yahoo.fr">roger_ral@yahoo.fr</a>
Randrianomenjanahary, Ranaivo	ONG GREEN	
Randriantsalama, Sylvain	Fédération des Opérateurs Miniers du Vakinakaratra (FEDOMINVAK)	
Ranorosoa, Nadine Joelle	IGM	<a href="mailto:nadine@wanadoo.mg">nadine@wanadoo.mg</a>
Raolison, Guy Raymond	Ministère de l'Energie et des Mines	<a href="mailto:raolisonguy@yahoo.fr">raolisonguy@yahoo.fr</a>
Rasoamalala, Vololonirina	Direction des Mines et Géologie	<a href="mailto:rasoamalalaniry@yahoo.fr">rasoamalalaniry@yahoo.fr</a>
Ratefiarivony, Joana	Commune Andriamena	
Ravelomanantsoa, Joachim Frédéric	ANGAP	<a href="mailto:cad@angap.mg">cad@angap.mg</a>
Ravelomanantsoa, Joalis Frédéric	ANGAP	<a href="mailto:cad@angap.mg">cad@angap.mg</a>
Ravelonjoma, Zandritsifafy		
Ravolahy, Arvel Christoph	Ministère de l'Energie et des Mines	<a href="mailto:mjn.bcmm@wanadoo.mg">mjn.bcmm@wanadoo.mg</a>
Razafimandimby, Jaona	CVM Amboditavolo	<a href="mailto:jaona_amboditavolo@yahoo.fr">jaona_amboditavolo@yahoo.fr</a>
Razafimandimby, Olivier	PGRM	<a href="mailto:mem.prsm@wanadoo.mg">mem.prsm@wanadoo.mg</a>
Razafindrakoto, Paul Max	KRAOMITA Malagasy	<a href="mailto:dd@kraoma.mg">dd@kraoma.mg</a>
Razafindriaka, Sylvain	Ministère de l'Energie et des Mines	<a href="mailto:sylriaka@yahoo.fr">sylriaka@yahoo.fr</a>
Razafintsalama Lalalison	PGRM	<a href="mailto:mem.prsm@wanadoo.mg">mem.prsm@wanadoo.mg</a>
Razanaririna, Henri Délice	Ministère de l'Energie et des Mines	<a href="mailto:henrirazanaririna@mel.wanadoo.mg">henrirazanaririna@mel.wanadoo.mg</a>
Sakaizanavalona, Mamisoa	Bamex USAID	<a href="mailto:mms@chemonics.mg">mms@chemonics.mg</a>
Tianraza, Jean Christopher	Ministère de l'Energie et des Mines	<a href="mailto:die.bcmm@wanadoo.mg">die.bcmm@wanadoo.mg</a>
Tsimanosika, Léandre	Commune de Brieville	
Voormeij, Danae	PAM Madagascar SARL	<a href="mailto:voormeij@hotmail.com">voormeij@hotmail.com</a>
<b>Malawi</b>		
Banda, Nathan	Malawi Government	<a href="mailto:nathansbanda@yahoo.com">nathansbanda@yahoo.com</a>
Bentry, Mkandawire	Gemstone Marketing Centre	<a href="mailto:bentrymkandawire@yahoo.com">bentrymkandawire@yahoo.com</a>

Gondwe Isaac	Gemstone Mining Centre	<a href="mailto:isaacmgondwe@yahoo.co.uk">isaacmgondwe@yahoo.co.uk</a>
Kalindekafe, Leonard	Malaw Government	<a href="mailto:ikalindekafe@yahoo.com">ikalindekafe@yahoo.com</a>
<b>Mauritania</b>		
Ibrahima Lamine Wane	Ministry of Mines and Industry	<a href="mailto:i_l_wane@yahoo.fr">i_l_wane@yahoo.fr</a>
Ould Hamoudy Mohamed Yahya	Ministry of Mines and Industry	<a href="mailto:yahyazerough@yahoo.fr">yahyazerough@yahoo.fr</a>
<b>Mongolia</b>		
Baatar Tumenbayarr	Sans Frontire Progres (NGO)	<a href="mailto:tumenba@magicnet.mn">tumenba@magicnet.mn</a>
Balganjav, Khuldorj	Swiss Agency for Development and Cooperation	<a href="mailto:khuldori@sam.mn">khuldori@sam.mn</a>
Chuluunbaatar, Enkhzaya	Minerals Resources and Petroleum Authority of Mongolia	<a href="mailto:Ch.Enkhzaya@mrpam.gov.mn">Ch.Enkhzaya@mrpam.gov.mn</a>
DavaaSambu, Nachim		<a href="mailto:sam@sam.mn">sam@sam.mn</a>
Enkhtuya, Demi		<a href="mailto:sam@sam.mn">sam@sam.mn</a>
<b>Mozambique</b>		
Abdulremani, Machon	Ministry of Mineral Resources	<a href="mailto:machonabdulremane@hotmail.com">machonabdulremane@hotmail.com</a>
Fatima Momade	Ministry of Mineral Resources	<a href="mailto:fmomade@snm.gov.mz">fmomade@snm.gov.mz</a>
Salvador Mondlane, Jr.	Eduardo Mondlane University	<a href="mailto:Salmond@zebra.uem.mz">Salmond@zebra.uem.mz</a>
Valoi, Geraldo	Ministry of Mineral Resources	<a href="mailto:gvaloi@dnm.gov.mz">gvaloi@dnm.gov.mz</a>
<b>Netherlands</b>		
Schouten, Maaïke	Solidaridad	<a href="mailto:maaike.schouten@solidaridad.nl">maaike.schouten@solidaridad.nl</a>
Walshe, Nicole	Both ENDS	<a href="mailto:nw@bothends.org">nw@bothends.org</a>
<b>Niger</b>		
Amadou Abdoul Razak	Ministry of Mines and Energy	<a href="mailto:abdoulracky@yahoo.fr">abdoulracky@yahoo.fr</a>
Ousmane Adamou	Ministry of Mines and Energy	<a href="mailto:adamousmane@yahoo.fr">adamousmane@yahoo.fr</a>
<b>Nigeria</b>		
Adeleke Oke Samson		
Adeyemi, Janet	Association of Women in Mining uin Nigeria	<a href="mailto:ifadeyemi@yahoo.com">ifadeyemi@yahoo.com</a>
Bakari Usman	Mineral Watch	<a href="mailto:engrbakari@yahoo.com">engrbakari@yahoo.com</a>
Linus Adie	Ministry of Solid Minerals	<a href="mailto:uladie2001@yahoo.co.uk">uladie2001@yahoo.co.uk</a>
Sulaiman Ibrahim	Mineral Watch Consult Limited	<a href="mailto:soaibrahim@yahoo.co.uk">soaibrahim@yahoo.co.uk</a>
<b>Pakistan</b>		
Irshad Ullah-Khan	M.E.F.T. Pakistan (Private) Limited	<a href="mailto:meft@isb.comsats.net.pk">meft@isb.comsats.net.pk</a>
<b>Peru</b>		
Reinoso Rivas, Victor Manuel		<a href="mailto:amasucperu@yahoo.es">amasucperu@yahoo.es</a>
Zoila Martinez	EKAMOLLE	<a href="mailto:zmartinez@ekamolle.org">zmartinez@ekamolle.org</a>
<b>Senegal</b>		
Ousmane Cisse	Ministry of Mines	<a href="mailto:o.cisse@dundee.ac.uk">o.cisse@dundee.ac.uk</a>
<b>Sierra Leone</b>		
Dyke Ezekiel		<a href="mailto:edykeumu@yahoo.com">edykeumu@yahoo.com</a>
Koroma Samuel	DFID Diamond Sector Project	<a href="mailto:sbk1558@yahoo.com">sbk1558@yahoo.com</a>
Patrick Lamin-Tongu	Network Movement for Justice and Development	<a href="mailto:nmid@nmjd.org">nmid@nmjd.org</a>
Squire, Chris B.	Government of Sierra Leone	<a href="mailto:chris@sierratel.sl">chris@sierratel.sl</a>
Tamba Alpha-Kpetewama	Peace Diamond Alliance	<a href="mailto:alphakpetewamatamba@yahoo.fr">alphakpetewamatamba@yahoo.fr</a>
<b>South Africa</b>		
Busi Ntuli	Mintek	<a href="mailto:busin@mintek.co.za">busin@mintek.co.za</a>
Chalkin Eugene	Turnkey Hydrolics	<a href="mailto:eugene@turnkeyhydrolics.co.za">eugene@turnkeyhydrolics.co.za</a>
Hart Tim	SRK Consulting	<a href="mailto:thart@srk.co.za">thart@srk.co.za</a>
Hoadley, Marie	Self-employed	<a href="mailto:mariehoadley@iafrica.com">mariehoadley@iafrica.com</a>
Hollesen, Paul	Attending as International council on Mining and Metals Representative (employer AngloGold Ashanti)	<a href="mailto:phollesen@anglogoldashanti.com">phollesen@anglogoldashanti.com</a>
Hooge, Lois	Natural Resources Canada	<a href="mailto:loishooge@worldonline.co.za">loishooge@worldonline.co.za</a>
Hund, Kirsten	NiZA/The Netherlands Institute for Southern Africa	<a href="mailto:kirsten.hund@niza.nl">kirsten.hund@niza.nl</a>
Limpatlaw, Daniel	Limpatlaw Consulting	<a href="mailto:daniel@limpatlawconsulting.com">daniel@limpatlawconsulting.com</a>
Loots, Charles	AngloGold Ashanti	<a href="mailto:cloots@anglogoldashanti.com">cloots@anglogoldashanti.com</a>
Mabasa Azaria	Mintek	<a href="mailto:azariam@mintek.co.za">azariam@mintek.co.za</a>
Mahlatsi, Sidney	Mintek	<a href="mailto:sidneym@mintek.co.za">sidneym@mintek.co.za</a>
Mutemeri, Nellie	Mintek	<a href="mailto:nelliem@mitek.co.za">nelliem@mitek.co.za</a>
Naicker, Sodhie	Mintek	<a href="mailto:sodhien@mintek.co.za">sodhien@mintek.co.za</a>
Petrus Fusi	Mintek	<a href="mailto:petrusf@mintek.co.za">petrusf@mintek.co.za</a>
Small, Ken	Mintek	<a href="mailto:azariam@mintek.co.za">azariam@mintek.co.za</a>
Taele Solomon Shimanko	Zenzele Technology Demonstration Centre	<a href="mailto:sandrad@zenzeleteck.co.za">sandrad@zenzeleteck.co.za</a>

<b>Suriname</b>		
Emanuels Nathalie	Geological and Mining Service, Ministry of Natural Resources	<a href="mailto:gmd@sr.net">gmd@sr.net</a>
Hansildaar, marciano	Geological and Mining Service, Ministry of Natural Resources	<a href="mailto:gmd@sr.net">gmd@sr.net</a>
Ko-Thie Chung-Kwie Tsing		<a href="mailto:gmd@sr.net">gmd@sr.net</a>
Paansa, Bernard	Geological and Mining Service, Ministry of Natural Resources	<a href="mailto:gmd@sr.net">gmd@sr.net</a>
Winston Plet	Geological and Mining Service, Ministry of Natural Resources	<a href="mailto:gmd@sr.net">gmd@sr.net</a>
<b>Switzerland</b>		
Olle Ostensson	UNCTAD	<a href="mailto:Olle.ostensson@unctad.org">Olle.ostensson@unctad.org</a>
<b>Tanzania</b>		
Aloyce Tesha	Ministry of Energy and Minerals	<a href="mailto:tesha@bol.co.tz">tesha@bol.co.tz</a>
Diwani Shamsa	Tanzania Women Miners Association	<a href="mailto:shdiwani@hotmail.com">shdiwani@hotmail.com</a>
Jumbe Leilla	Tanzania Women Miners Association	<a href="mailto:tawomat@yahoo.com">tawomat@yahoo.com</a>
Khalfan Said Masoud	Sambaru Mining Group Limited	<a href="mailto:dir_masoud@yahoo.com">dir_masoud@yahoo.com</a>
Mutagwaba Wilson	MTL Consulting Company Limited	<a href="mailto:wmutagwaba@yahoo.co.uk">wmutagwaba@yahoo.co.uk</a>
Mwaipopo Rosemarie	MTL Consulting Company Limited	<a href="mailto:ny_lila@yahoo.com">ny_lila@yahoo.com</a>
Negele Eunice	Tanzania Women Miners Association	<a href="mailto:tawomat@yahoo.com">tawomat@yahoo.com</a>
Mwanne Ambari	Tanzania Women Miners Association	<a href="mailto:tawomat@yahoo.com">tawomat@yahoo.com</a>
Sezinga Rogers	TAN DISCOVERY	<a href="mailto:rsezinga@yahoo.com">rsezinga@yahoo.com</a>
<b>Uganda</b>		
Hinton, Jennifer	Department of Geological Survey and Mines	<a href="mailto:jenniferhinton@gmail.com">jenniferhinton@gmail.com</a>
Lubangakene Chris	Department of Geological Survey and Mines	<a href="mailto:lc_kene@hotmail.com">lc_kene@hotmail.com</a>
Nakku, Grace	Department of Geological Survey and Mines	<a href="mailto:gnakku@yahoo.com">gnakku@yahoo.com</a>
Rudigizah, Christopher	Ministry of Energy and Mineral Development	<a href="mailto:rudigizah2003@yahoo.co.nz">rudigizah2003@yahoo.co.nz</a>
Ruth Mbabazi	Ministry of Energy and Mineral Development	<a href="mailto:mbabaru2003@yahoo.com">mbabaru2003@yahoo.com</a>
Tuhumwire Joshua	Ministry of Energy and Mineral Development	<a href="mailto:joshua.tuhumwire@gmail.com">joshua.tuhumwire@gmail.com</a>
<b>United Kingdom</b>		
Bone, Andrew	DE BEERS GROUP	<a href="mailto:andrew.bone@debeersgroup.com">andrew.bone@debeersgroup.com</a>
D'Souza, Kevin	Institute of Materials, Minerals & Mining / Wardell Armstrong LLP	<a href="mailto:kdsouza@wardell-armsrong.com">kdsouza@wardell-armsrong.com</a>
Garvin Hilscon	University of Manchester	<a href="mailto:gavin.hilscon@manchester.ac.uk">gavin.hilscon@manchester.ac.uk</a>
Graymore Daniel	UK Department for International Development	<a href="mailto:d-graymore@dfid.gov.uk">d-graymore@dfid.gov.uk</a>
Hanrahan, David	Blacksmith Institute	<a href="mailto:dhanrahan@blacksmith.com">dhanrahan@blacksmith.com</a>
Hobbs, Jonathan	CASM - Department for International Development	<a href="mailto:i-hobbs@dfid.gov.uk">i-hobbs@dfid.gov.uk</a>
Huxford, David	United Nations Security Council	<a href="mailto:davidhuxford@hotmail.com">davidhuxford@hotmail.com</a>
Levin, Estelle	Self-employed	<a href="mailto:estellelevin@hotmail.com">estellelevin@hotmail.com</a>
McCready, Peter	Mining Journal	<a href="mailto:peter.mccready@mining-journal.com">peter.mccready@mining-journal.com</a>
Barry Dalal-Clayton	International Institute for Environment & Development	<a href="mailto:barry.dalal-clayton@iied.org">barry.dalal-clayton@iied.org</a>
Nelson, Peter	Land Use Consultants	<a href="mailto:nelson_p@bristol.landuse.co.uk">nelson_p@bristol.landuse.co.uk</a>
Sadia, Mohammed	University of Manchester	<a href="mailto:sadia.mohammed@postgrad.manchester.ac.uk">sadia.mohammed@postgrad.manchester.ac.uk</a>
Valerio, Greg	Cred Fair Trade Jewellery	<a href="mailto:greg.valerio@cred.tv">greg.valerio@cred.tv</a>
<b>United States of America</b>		
Block, Meredith	Blacksmith Institute	<a href="mailto:block@blacksmithinstitute.org">block@blacksmithinstitute.org</a>
Caballero, Evelyn	Self-employed	<a href="mailto:lololola@uninet.net.id">lololola@uninet.net.id</a>
Carmona, Charles	Guild laboratories, Inc.	<a href="mailto:cicarmona@aol.com">cicarmona@aol.com</a>
Colvin, David	International Business Initiatives	<a href="mailto:dcolvin@ibi-usa.com">dcolvin@ibi-usa.com</a>
DeLeon, Sally	University of Vermont	<a href="mailto:sarah.deleon@gmail.com">sarah.deleon@gmail.com</a>
Enrico Carisch	UN Security Council	<a href="mailto:rico.carisch@rcn.com">rico.carisch@rcn.com</a>
Hecht, Randy		<a href="mailto:rbhecht@aphra.com">rbhecht@aphra.com</a>
Joseph, James	Corporation for Economic Opportunity	<a href="mailto:josephjames@bellsouth.net">josephjames@bellsouth.net</a>
Keane, Susan	Natural Resources Defense Council	<a href="mailto:skeane@nrdc.org">skeane@nrdc.org</a>
Kohler, Veronika	World Bank	<a href="mailto:vkohler@worldbank.org">vkohler@worldbank.org</a>
McMahon, Gary	Consultant	<a href="mailto:gmcMahon@worldbank.org">gmcMahon@worldbank.org</a>



Nyhan Jones Veronika		<a href="mailto:vnyhan@worldbank.org">vnyhan@worldbank.org</a>
Phillips, Lucie	International Business Initiatives	<a href="mailto:lcphillips@ibi-usa.com">lcphillips@ibi-usa.com</a>
Sheldon, Christopher	World Bank	<a href="mailto:scheldon@worldbank.org">scheldon@worldbank.org</a>
Stanley, Michael	The World Bank Group	<a href="mailto:mstanley@worldbank.org">mstanley@worldbank.org</a>
Usman, Ali	Global Assets Management	<a href="mailto:chusmanali@AOL.com">chusmanali@AOL.com</a>
Van der Veen, Peter	World Bank	<a href="mailto:pvanderveen@worldbank.org">pvanderveen@worldbank.org</a>
Wade, Watson	Pride Diamonds	<a href="mailto:wwatson@pridediamonds.com">wwatson@pridediamonds.com</a>
Walser, Gotthard	Banque Mondiale, Secretariat CASM	<a href="mailto:gwalsen@worldbank.org">gwalsen@worldbank.org</a>
<b>Zambia</b>		
Drechsler, Bernd		
Kababa Phillimon	Kalomo Miners Association	<a href="mailto:chiefkalembwe@yahoo.com">chiefkalembwe@yahoo.com</a>
Lyapa Manza	Kalomo Miners Ass/Kariba Minerals Ltd.	<a href="mailto:lyapam@yahoo.co.uk">lyapam@yahoo.co.uk</a>
Motomoto, Helen	Self-employed	<a href="mailto:helenmoto@yahoo.co.uk">helenmoto@yahoo.co.uk</a>
Mulenga Mulenga Richard	ESMAZ	<a href="mailto:emeraldzmb@yahoo.co.uk">emeraldzmb@yahoo.co.uk</a>
Shaba George	ESMAZ	<a href="mailto:gshaba@zamtel.zm">gshaba@zamtel.zm</a>
Sichone Baxter	ESMAZ	<a href="mailto:bsichone@yahoo.com">bsichone@yahoo.com</a>
<b>Zimbabwe</b>		
Neube, Ellen		<a href="mailto:womeninmining@cooltoad.com">womeninmining@cooltoad.com</a>
Singo Patience	GOODLIFE INVESTMENTS	<a href="mailto:patiencesingo@yahoo.co.uk">patiencesingo@yahoo.co.uk</a>
Tavengwa Stanley	Zimbabwe Panners Association	<a href="mailto:stantavengwa@yahoo.com">stantavengwa@yahoo.com</a>
Ruvidzo Evanz		