Supporting the Advancement of Artisanal and Small Scale Mining (ASM) in Uganda

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OUTLINE

MINING IN UGANDA

Sustainable Management of Mineral Resources Project

THE WAY FORWARD

SUPPORT FOR ASM

ACHIEVEMENTS AND OUTCOMES

PROMOTION OF GENDER EQUALITY
Population ~28 million (88% rural)
Growth rate = 3.3 %
Fertility Rate = 7.1
Per cap income = US$ 259 /a
~40% living on <$1/day

Geological Survey of Uganda established in 1919.

Mining peak in the 1960's: up to 30% of foreign exchange earnings

Closure of Kilembe Mine in the late 1970's a major catalyst in the upsurge of ASM (among other factors...
ACTIVE MINING AREAS

- gold
- tin
- wolfram
- coltan

**Industrial Minerals:**
- limestone
- marble
- kaolin
- vermiculite
- sand
- stone quarries
- clay
- salt

Stone/clay mined throughout
UGANDAN MINERALS SECTOR

Large Scale Mining

- Hima Cement Ltd., Kasese District
- Tororo Cement Ltd., Tororo District

Expected to rise substantially with increased investment in exploration.

Overall sector growth is ~11%/yr

Cement Production at Tororo Cement Ltd.
UGANDAN MINERALS SECTOR

Small to Medium Scale Mining

- A number of small to medium scale licensed operations (most employ 30-50 people, >90% men)
- Mostly by Ugandan investors (sometimes with foreign joint venture partners)

Busitema Gold Mine, Busia District
Kisita Gold Mine
UGANDAN MINERALS SECTOR

ASM = Artisanal and Small Scale Mining

- *Mainly* un-mechanized

Woman panning for gold in Kaabong District

Men breaking pozolonic ash for sale to Hima Cement near Fort Portal
UGANDAN MINERALS SECTOR

ASM in Uganda

• *Mainly* un-mechanized
• *Mainly* unlicensed

The LICENSED Dwata Coltan Mine in Ntungamo District
UGANDAN MINERALS SECTOR

ASM in Uganda

- *Mainly* un-mechanized
- *Mainly* unlicensed
- *Mainly* disorganized

Laroo Stone Quarry Association: ~200 women and 100 men are members
UGANDAN MINERALS SECTOR

ASM = Artisanal and Small Scale Mining

- *Mainly* un-mechanized, unlicensed and disorganized.
- *Mainly* subsistence mining *(hand-to-mouth)*
## UGANDAN MINERALS SECTOR

<table>
<thead>
<tr>
<th>LSM/MSM</th>
<th>ASM</th>
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<tr>
<td>Royalties: ~1.2 million USD (2007)</td>
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<tr>
<td>Employment: ~2,000 (&gt;90% men)</td>
<td>&gt;150,000 (~45% women)</td>
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### A Few Other Benefits:
- **Infrastructure**
  - roads, power, water
- **Social Responsibility Projects**
  - schools, clinics, water

- Most cash spent locally.
- >90% of most mineral production
UGANDAN MINERALS SECTOR

Both LSM/MSM and ASM make important contributions to development in Uganda!

WHAT IS THE “BEST USE” OF A MINERAL RESOURCE?

• Need proper exploration to determine “best use”.
• About 1 in 1000 exploration projects becomes a “big” mine.
• Most deposits known to date are small and suitable only for ASM

HOW CAN THE GOVERNMENT SUPPORT “ALL SCALES” OF MINING?
Sustainable Management of Mineral Resources Project (SMMRP)

BACKGROUND


2000: After comprehensive review of the mineral sector, the GoU formally requested World Bank support for SMMRP.

2001: The GoU also approached the AfDB and the NDF seeking additional assistance.

2004: Signed credit agreement with IDA

2005: Signed agreements with AfDB and NDF
Sustainable Management of Mineral Resources Project (SMMRP)

**PROJECT FINANCING ARRANGEMENTS:**

**SMMRP/MRMCBP total Project Cost:** US$ 42.7 million

- **IDA Loan:** US$ 25.0 million
- **NDF Loan:** Euro 6.0 m (Equiv. US$ 7.0m)
- **AfDB grant:** UA 5.35 m (Equiv. US$ 7.7 m)
- **GOU:** US$ 3.0 million

Additional **US$ 5 million** provided by World Bank together with a **2-year extension of SMMRP.**
Sustainable Management of Mineral Resources Project (SMMRP) 2004 - 2011

MAIN OBJECTIVE:

Strengthening Government’s capacity to develop a sound minerals sector based on private investments and improvements in selected artisanal and small scale mining areas.
Sustainable Management of Mineral Resources Project (SMMRP)

FIVE MAIN COMPONENTS:

1. Supporting Governance and Transparency

2. COMMUNITY DEVELOPMENT AND SMALL SCALE MINING

3. Environmental and Social Management Framework

4. Geo-information and Development

5. Project Coordination and Management
SMMRP Component Two: Community Development & Small Scale Mining

RECONNAISSANCE AND BASELINE STUDIES

- Guidebook for implementation based on Sustainable Livelihoods Approach.
- Training for multi-disciplinary team of DGSM staff in implementation of baseline studies.
- Include gender considerations in methods, collection of gender-disaggregated data and gender analysis.

DETAILED BASELINE STUDIES

RECONNAISSANCE SURVEY
SMMRP Component Two: Community Development & Small Scale Mining

“ACTION PLAN FOR PROMOTION OF GENDER EQUALITY IN MINING”

- Framework for consultations, policy analysis and comprehensive assessment
- Recommendations for SMMRP and DGSM (10 ACTION ITEMS)

PRELIMINARY GENDER ANALYSIS

DETAILED BASELINE STUDIES

RECONNAISSANCE SURVEY

More than 20 DGSM Officers received gender training shortly thereafter.
SMMRP Component Two:
Community Development & Small Scale Mining

Foundation for:
ASM EXTENSION SERVICES PROGRAM

PRELIMINARY GENDER ANALYSIS
DETAILED BASELINE STUDIES
RECONNAISSANCE SURVEY
SMMRP Component Two: Community Development & Small Scale Mining

ESP identified NEEDS AND PRIORITIES of:

- Women and men miners
- Extension Service Providers (especially DGSM.)

EXTENSION SERVICES PROGRAM (ESP)

PRELIMINARY GENDER ANALYSIS

DETAILED BASELINE STUDIES

RECONNAISSANCE SURVEY

ESP design also informed subsequent SMMRP activities!
SMMRP Component Two: Community Development & Small Scale Mining

EXTENSION SERVICES PROGRAM (ESP)

- Intended to inform *institutional model* of DGSM:
  - Roles and responsibilities of DGSM Officers
  - Inter-sectoral coordination

Main Recommendations address:

1. Capacity Building needs of Extension Service Providers
2. Motivation and Personal Commitment of Extension Service Providers
3. Financial Sustainability Mechanisms
4. Building Political Will and Institutionalizing the ESP
SMMRP Component Two:
Community Development & Small Scale Mining

NETWORK OF EXTENSION SERVICE PROVIDERS

- Ministry of Health
- Ministry of Gender, Labour and Social Development
- DEPT of GEOLOGICAL SURVEY AND MINES (DGSM)
- National Environmental Management Authority
- Ministry of Water and Environment
- National Forest Authority
- Uganda Chamber of Mines
- Uganda Wildlife Authority

DGSM is not mandated or capable of fulfilling all ASM needs
SMMRP Component Two: Community Development & Small Scale Mining

NETWORK OF EXTENSION SERVICE PROVIDERS

DISTRICT LOCAL GOVERNMENT

LOCAL LEADERS CBOs, NGOs

Women and Men Miner-Leaders

Environment, Health, Welfare and Labour Officers

DEPT of GEOLOGICAL SURVEY AND MINES (DGSM)

Uganda Chamber of Mines

Ministry of Health

Ministry of Labour and Development

Ministry of Forestry and Environment

Ministry of Gender, Labour and Social Development

National Environmental Management Authority

National Forest Authority

Uganda Wildlife Authority
SMMRP Component Two:
Community Development & Small Scale Mining

NETWORK OF EXTENSION SERVICE PROVIDERS

DISTRICT LOCAL GOVERNMENT

LOCAL LEADERS
CBOs, NGOs

Women and Men Miner-Leaders

DEPT of GEOLOGICAL SURVEY AND MINES (DGSM)

COMMUNICATION MUST BE TWO-WAY!

Uganda Chamber of Mines
Ministry of Gender, Labour and Social Development
National Environmental Management Authority
Ministry of Water and Environment
National Forest Authority
Uganda Wildlife Authority
How can SMMRP develop the 
capacity, motivation and 
partnerships needed to formalize 
the extension services 
program???
SMMRP Component Two: Community Development & Small Scale Mining

SMMRP Training and Awareness Campaign for Artisanal and Small Scale Miners

1. Formation of the TRAINING AND AWARENESS CAMPAIGN COMMITTEE (TACC) – 22 members

- DGSM – Geologists, Mines Inspectors, Mineral Processors, Social Scientists, Environmental Specialists
- Uganda Chamber of Mines, Uganda Quarry Operators Association, Uganda Mining Association
- Ministry of Health; NEMA, Ministry of Gender, Labour and Social Development, Ministry of Water and Environment
SMMRP Component Two: Community Development & Small Scale Mining

SMMRP Training and Awareness Campaign for Artisanal and Small Scale Miners

1. Formation of the TACC

2. CO-DEVELOPMENT OF TRAINING MATERIALS

   - GENDER TRAINING of TACC
   - GENDER AUDITS of each TACC meeting and TACC Material Development Workshop (alternately done by different TACC members)
   - GENDER MAINSTREAMING in Training Material and Training Session Design

3. Geology and exploration

4. Safe mining methods

5. Mineral Processing for Profits

6. Occupational health and safety

7. Environmental Management

8. Business Skills

9. Legal Issues

10. Community Health

11. Community Development
SMMRP Component Two: Community Development & Small Scale Mining

SMMRP Training and Awareness Campaign for Artisanal and Small Scale Miners

1. Formation of the TACC
2. Co-development of Training Materials
   • SMALL SCALE MINING HANDBOOK
3 MINING METHODS

3.6.4 SUPPORTING SHAFTS AND TUNNELS

Underground mine workings can be supported by wood, concrete, steel, brick and stone. Timber supports are very common and relatively easy to install and maintain.

COLLAPSE OF UNDERGROUND WORKINGS CAUSE INJURY, DEATH AND LOST ACCESS TO VALUABLE ORE! ENSURE YOUR MINE IS WELL-SUPPORTED, SAFE AND PROFITABLE.

(a) Timbers should be monitored and maintained.  
(b) Always support mine using handrails (M. Walls, 2006)

TIMBER SUPPORTS

Timber does break down over time and under the weight of rock so maintenance is essential! Unlike other supports, wood (timber) wams miners by making a loud cracking sound just before it fails. Miners shouldn’t rely on this sound alone, but should visually inspect supports for cracks forming and bending of the wood.

Breakdown of timber can be slowed by:

- Removing bark (at the very least)
- Burning the outside layer
- Submerging the timber in a tank of creosote, inflammable engine oil or zinc chloride solution.

Any timbers should be set on a strong foundation (solid stone floor or, when in softer rock, put timber props on solid wood or stone blocks).

The weaker the rock, the closer the spacing between timbers is needed! Important (semi-permanent) tunnels and shafts should be well supported with timber sets every 1m to 1.5m.

Figure 3-57.   (a) Timbers should be monitored and maintained.  
(b) Always support mine using handrails (M. Walls, 2006)

Photo 3-22: A well-supported small-scale mine in Mongella (J. Hinton)

PIT FLOODING

During and after heavy rainfalls, rainwater runoff can enter and fill up open pits or underground workings. In some cases, groundwater inflow can also lead to flooding.

This can lead to cold feet disease (from working in water for long periods), trapping and drowning of workers, collapse of pit or tunnel walls (below) and can also be a breeding ground for malaria-carrying mosquitoes.

(a) Pit flooding has stopped work at this clay mine in Waktoro District.  
(Photographer: V. Kass)

(b) Mosquito breeding grounds where women and men miners work in Laroso Stone Quarry. Gulu (Photo: J. Hinton)

(c) Women and men gold miners in Magihe, Bokoro District are at greater risk of malaria and cold feet disease (Photo: J. Storms)

Pit flooding can be controlled or minimized by:

- Constructing drainage channels to divert surface run off away from the pit entrance perhaps towards abandoned pits.
- Pumping water out of flooded pits using water pumps.
- Use PPE such as safety foot wear (rubber boots) while entering a flooded pit.
- Drainage can be collected and used in mineral processing activities, see Section 3.4.2. Water Management for more tips on how to divert, treat and manage run-off water.

114 SMALL SCALE MINING HANDBOOK

Many children have drowned in flooded pits!  
Always fence-off and put signs around pits to keep children and livestock out!
SMMRP Component Two: Community Development & Small Scale Mining

SMMRP Training and Awareness Campaign for Artisanal and Small Scale Miners

1. Formation of the TACC
2. CO-DEVELOPMENT OF TRAINING MATERIALS
   - SMALL SCALE MINING HANDBOOK
   - Curriculum for 2-week TRAINING-OF-TRAINERS WORKSHOPS (ToTs)
   - FACILITATORS GUIDES for FIELD-BASED TRAINING WORKSHOPS (including a “Guidebook for Training Adults in ASM Communities”)
SMMRP Component Two: Community Development & Small Scale Mining

SMMRP Training and Awareness Campaign for Artisanal and Small Scale Miners

1. Formation of the TACC
2. Co-development of Training Materials
3. TRAINING-OF-TRAINERS (ToTs) WORKSHOPS
   - 12-days training in each of the Critical Training Topics plus training methods, adult learning principles.
   - 188 Women and men miners, District and Subcounty Officers, NGO, CBO reps from 17 communities Included
   - Daily Gender Audits (by one woman and one man) and overall Gender Audit
   - Special modules on gender-in-training
TWO 2-week TRAINING-of-TRAINERS

- PRACTICING MINERAL IDENTIFICATION
- DEVELOPING A SIMPLE MINE LAYOUT
- IDENTIFYING CRITICAL GENDER ISSUES IN ASM
- LEARNING ABOUT EIAs IN ASM
PARTICIPANTS WORK IN GROUPS TO DESIGN TRAINING SESSIONS BASED ON THEIR MINERALS AND MAIN ISSUES

TRAINERS APPLYING THEIR KNOWLEDGE IN THE FIELD

TEAM BUILDING and INCLUSION

Babies always welcome!
TWO 2-week TRAINING-of-TRAINERS

DISTRICT-BY-DISTRICT MINING SONG COMPETITIONS

TEAM BUILDING

COMPETITION: MINERS TRAINING MINERS
SMMRP Component Two: Community Development & Small Scale Mining

SMMRP Training and Awareness Campaign for Artisanal and Small Scale Miners

1. Formation of the TACC
2. Co-development of Training Materials
3. Training-of-Trainers Workshops – 188 trainers
4. Community-based Training Workshops
TRAINING AND AWARENESS CAMPAIGN FOR ARTISANAL AND SMALL SCALE MINERS

Community-based Training of Women and Men Miners

TACC members partnered with local trained trainers to run 5-day training sessions in 17 communities.

- Geology, mining and mineral processing
- Related environmental issues

TRAINED MINER-TRAINERS IN ACTION
TRAINING AND AWARENESS CAMPAIGN FOR ARTISANAL AND SMALL SCALE MINERS

Community-based Training of Women and Men Miners

- Geology, mining and mineral processing; environmental mgmt

- Business Skills (planning, marketing, selling, buying, record-keeping)

Also an opportunity to evaluate trained trainers
TRAINING AND AWARENESS CAMPAIGN FOR ARTISANAL AND SMALL SCALE MINERS

Community-based Training of Women and Men Miners

- Geology, mining and mineral processing; environmental mgmt
- Business Skills
- Occupational Health and safety

Proper Condom Use

How Cholera is Spread
TRAINING AND AWARENESS CAMPAIGN FOR ARTISANAL AND SMALL SCALE MINERS

Community-based Training of Women and Men Miners
- Geology, mining and mineral processing; environmental mgmt
- Business Skills
- Occupational health and safety; Community Health
- Conflict Resolution Skills (including domestic)
- How to form effective organizations

Conflict Resolution Role Plays
TRAINING AND AWARENESS CAMPAIGN FOR ARTISANAL AND SMALL SCALE MINERS

Community-based Training of Women and Men Miners

- Geology, mining and mineral processing; environmental management
- Business Skills
- Occupational health and safety; Community Health
- Conflict Resolution; Organization formation and strengthening
- **How to (and WHY) get a license!**
TRAINING AND AWARENESS CAMPAIGN FOR ARTISANAL AND SMALL SCALE MINERS

Community-based Training of Women and Men Miners

- Additional mobilization efforts and budgeting to support equal participation of women.
- 930 women (40%) and men (60%) trained.
- Primarily miners but also 5-8 local leaders and fabricators trained in each community.

Activities

Enjoying Lunch
SMMRP Component Two: Community Development & Small Scale Mining

**KEY ISSUE IDENTIFIED:**

Severe gender inequalities

- ASM TRAINING & AWARENESS CAMPAIGN
- EXTENSION SERVICES PROGRAM (ESP)
- PRELIMINARY GENDER ANALYSIS
- DETAILED BASELINE STUDIES
- RECONNAISSANCE SURVEY
SMMRP Component Two: Community Development & Small Scale Mining

National Strategy for Promotion of Gender Equality in Mining

1. Consultative Meetings – Key National Agencies and Organizations
2. Gender analysis of Mining Policy, review of related policies.
3. Community-based Training and Consultative Workshops
4. National Multi-Stakeholder Workshop:
   - 23 women miners, 23 man miners
   - 16 Key agency and organization representatives
   - 12 DGSM staff
National Strategy for
Promotion of Gender Equality in Mining

Recommendations put forth related to:

1. Mainstreaming of Gender in the Mineral Policy, Laws and Regulations
2. Access to Information, Training and Support
3. Development of a DGSM Gender Policy.
4. Necessary partnerships and role of various stakeholders in the promotion of gender equality.
5. Indicators for measuring progress towards gender equality in mining.
National Strategy for Promotion of Gender Equality in Mining

Just a few of the recommendations.....

e.g.) In terms of Mining and Exploration Licenses

Women and men artisanal miners working in the area of interest should also be consulted prior to granting.

Special efforts should be undertaken to ensure women participate equally in consultations, including separate meetings and specific mobilization measures.
An example of recommendations:

**e.g.) Monitoring/evaluation of DGSM Work Programs:**

Targets/objectives for DGSM division work programs should be gender-responsive and include gender-disaggregated data collection (e.g. licensing, # of clients served), related reporting and evaluation of performance.
SMMRP Component Two: Community Development & Small Scale Mining

- NATIONAL GENDER STRATEGY
- ASM TRAINING & AWARENESS CAMPAIGN
- EXTENSION SERVICES PROGRAM (ESP)
- PRELIMINARY GENDER ANALYSIS
- DETAILED BASELINE STUDIES
- RECONNAISSANCE SURVEY

WHAT ARE THE OUTCOMES FROM THIS WORK?
SMMRP Component Two: Community Development & Small Scale Mining

MAIN OUTCOMES (so far…)

- Over 80 Prospecting Licenses issued to trainees.
- Over 50 requests for assistance in obtaining a small scale mining license (location license).
- 10 location licenses granted to trainees.
- Formation of more than 20 local ASM Associations
- Formation of three regional ASM associations
- Establishment of a formal network of extension service providers!

A DETAILED EVALUATION TO BE CARRIED OUT BY THE END OF MARCH… *but other successes reported*
SMMRP Component Two:
Community Development & Small Scale Mining

MAIN OUTCOMES (cont…)

- **Improved Use of Mining Revenues.** E.g.) *Kasese*: Increased savings, investment in home improvements or other small businesses.

- **Increased selling prices.** E.g.) *Tororo*: Selection of better quality stones for lime production, grading and marketing of stone aggregate both yielding higher prices. Aggregating individual production to attract buyers.

- **Value Addition.** E.g.) *Mukono*: Selection of higher-quality clay and adoption of different moulding methods to produce higher priced ventilation bricks and floor tiles.
SMMRP Component Two: Community Development & Small Scale Mining

MAIN OUTCOMES (cont…)

- **Environmental Awareness.** Miners in several communities have reported backfilling pits and tree-planting ventures. In some places, fish-farming is being attempted in abandoned flooded pits.

- **Occupational Safety.** Many miners are now benching open pits to increase stability. Timbering of underground workings being carried out at some sites in Busia and Bushenyi.

**FORMAL EVALUATION** – both qualitative and quantitative, as well as gender-disaggregated Data will yield more insight…. 
SMMRP Component Two: Community Development & Small Scale Mining

- National Gender Strategy
- ASM Training & Awareness Campaign
- Extension Services Program (ESP)
- Preliminary Gender Analysis
- Detailed Baseline Studies
- Reconnaissance Survey

What is the way forward?
SMMRP Component Two: Community Development & Small Scale Mining

WHAT IS COMING NEXT:

- March 10<sup>th</sup>-14<sup>th</sup>: NATIONAL ASM CONFERENCE
- Small Grants Program.
- Financing ASM
- Best Practices Projects: gold mining, stone quarries, salt mining, agro-minerals.
- Training: Organizational Strengthening
- Piloting the “Extension Services Program” (towards institutionalization)
CONCLUSIONS & LESSONS LEARNED

1. Efficacy of Local Counterparts/Trainers.
   - ~4 out of 10 local trainers are highly effective, reliable and motivated. Important partners in future.
   - Miner-trainers are more effective at mobilization than non-miner trainers. Both have roles to play.
   - Many local trainers have conducted self-initiated training within their communities and report regularly on their progress.

LESSON: Train a large number of women and men, identify individual skills and interests over time.
2. Gender-responsive planning and budgeting

- Special measures *must* be taken to ensure participation and benefits to women as well as men.
- Ensure **gender needs** considered in design and implementation of training.
- **Budget time and funds** to ensure their participation (for child-minders also) and minimize domestic disruptions.
- Some of the **most effective** trainers and **most proactive miners** are women (including those with small children!)

**LESSON:** Be gender-responsive for better outcomes!
SMMRP Component Two: Community Development & Small Scale Mining

CONCLUSIONS & LESSONS LEARNED

3. Long-term Extension Service Provision

- Establishing an inter-disciplinary, multi-sectoral network takes time.
- Give attention to capacity development, motivation, attitudes and team building for better outputs.
- Use of Adult Learning Principles is a must!
- Personal relationships (and understanding individual strengths and weaknesses) is critical!
- Greater attention needs to be given to building political will to ensure institutionalization and sustainability.

LESSON: FOCUS ON INSTITUTIONALIZATION
THANK YOU

Any questions and comments are welcome!