



**Ministry of Energy and Mineral Development  
Department of Geological Survey and Mines**

*Sustainable Management of Mineral Resources Project*

**SUPPORTING POSITIVE CHANGE AND  
DEVELOPMENT OF ARTISANAL AND  
SMALL SCALE GOLD MINING IN  
UGANDA.**

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Entebbe, Uganda.**

# ASM in Uganda

- Approx. 150,000 directly depend on it and indirectly benefits an estimated 700,000.
- Mainly un-mechanized, unlicensed, disorganized, and subsistence in nature.

**GOVERNMENT OF UGANDA RECOGNIZES  
CONTRIBUTION OF ASM TO NATIONAL  
POVERTY REDUCTION!!!**

**CHANGE is a function of HUMAN CAPACITY AND THE *WILL* to change (supported by enabling conditions)**

**HUMAN CAPACITY DEVELOPMENT IS BASED ON...**

# **KSA**

- **K**nowledge: Mastery of content and information
- **S**kills: Ability to carry out tasks at a defined level of competence.
- **A**ttitudes: Values and beliefs that affect the probability of behavioural change.

# **CHANGE is a function of HUMAN CAPACITY and THE WILL to change (supported by enabling conditions)**

**FOCUS ON HUMAN CAPACITY DEVELOPMENT (KSA) and ENABLING CONDITIONS FOR BOTH:**

- **Women and men miners** and their families and communities
- **Extension Service Providers!** Mining departments, other partners (environment agencies, health service providers, financing institutions, etc etc etc.

# **ASM IN UGANDA**

**What initiatives are in place to improve Artisanal and Small Scale Mining?**

# **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**

## **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.**

**How has SMMRP contributed to  
Artisanal and Small Scale  
Mining enhancement in  
Uganda?**



# **SMMRP Component Two: Community Development & Small Scale Mining**

## **RECONNAISSANCE AND BASELINE STUDIES**

- **“Toolkit for Baseline Studies in ASM Communities”**
- **Training for multi-disciplinary team of DGSM staff in implementation.**
- **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**

**PRELIMINARY GENDER  
ANALYSIS**

**DETAILED BASELINE STUDIES**

**RECONNAISSANCE SURVEY**



***Foundation for:***

**ASM**

**EXTENSION**

**SERVICES**

**PROGRAM**

# **SMMRP Component Two:**

## **Community Development & Small Scale Mining**

**PRELIMINARY GENDER  
ANALYSIS**

**DETAILED BASELINE STUDIES**

**RECONNAISSANCE SURVEY**



***Foundation for:***

**ASM**

**EXTENSION**

**SERVICES**

**PROGRAM**

# **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**

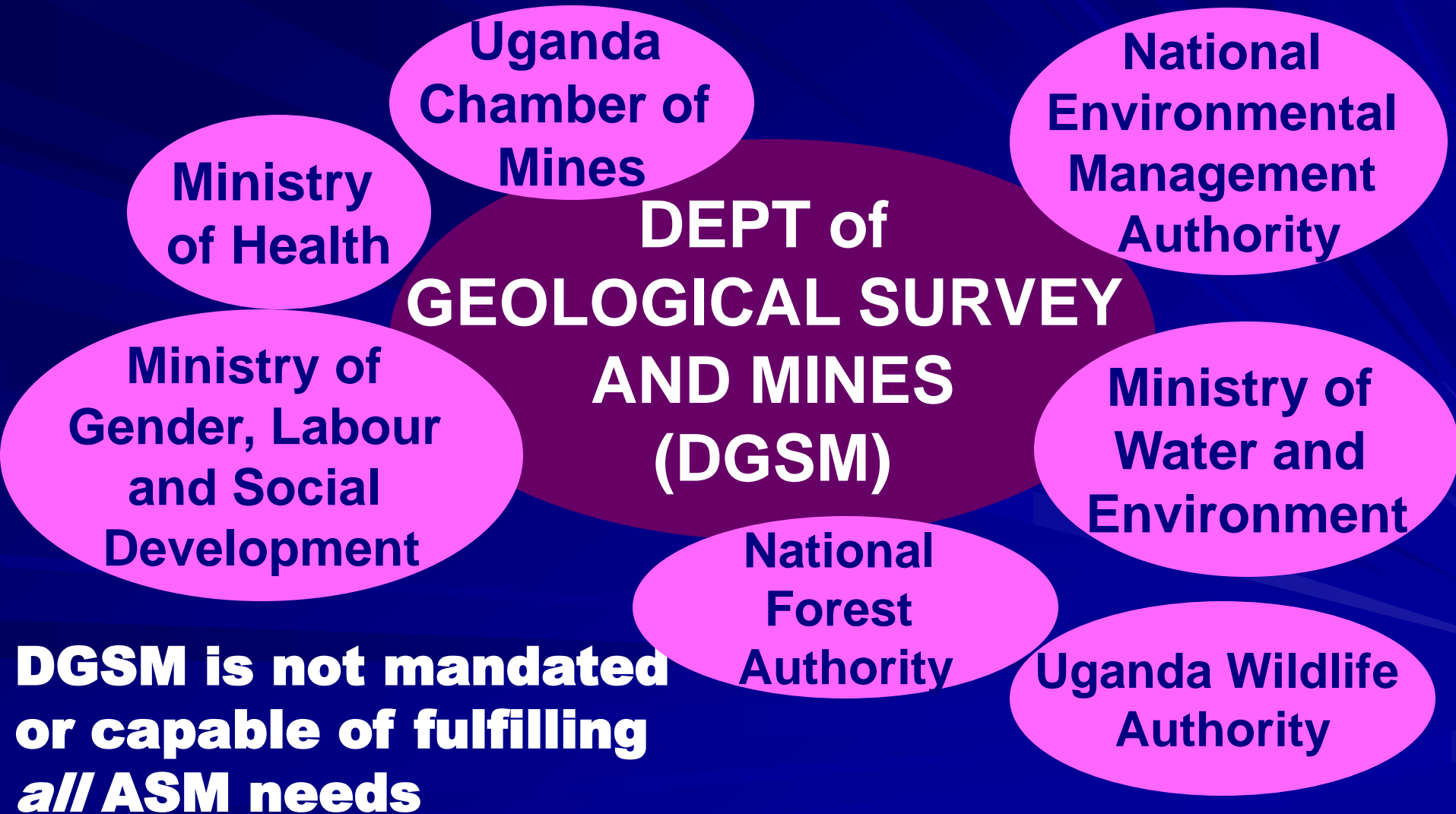
## **EXTENSION SERVICES PROGRAM (ESP)**

### **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**



# SMMRP Component Two: Community Development & Small Scale Mining NETWORK OF EXTENSION SERVICE PROVIDERS

Environment,  
Health,  
Welfare  
and Labour  
Officers

**DISTRICT LOCAL  
GOVERNMENT**

**LOCAL LEADERS  
CBOs, NGOs**

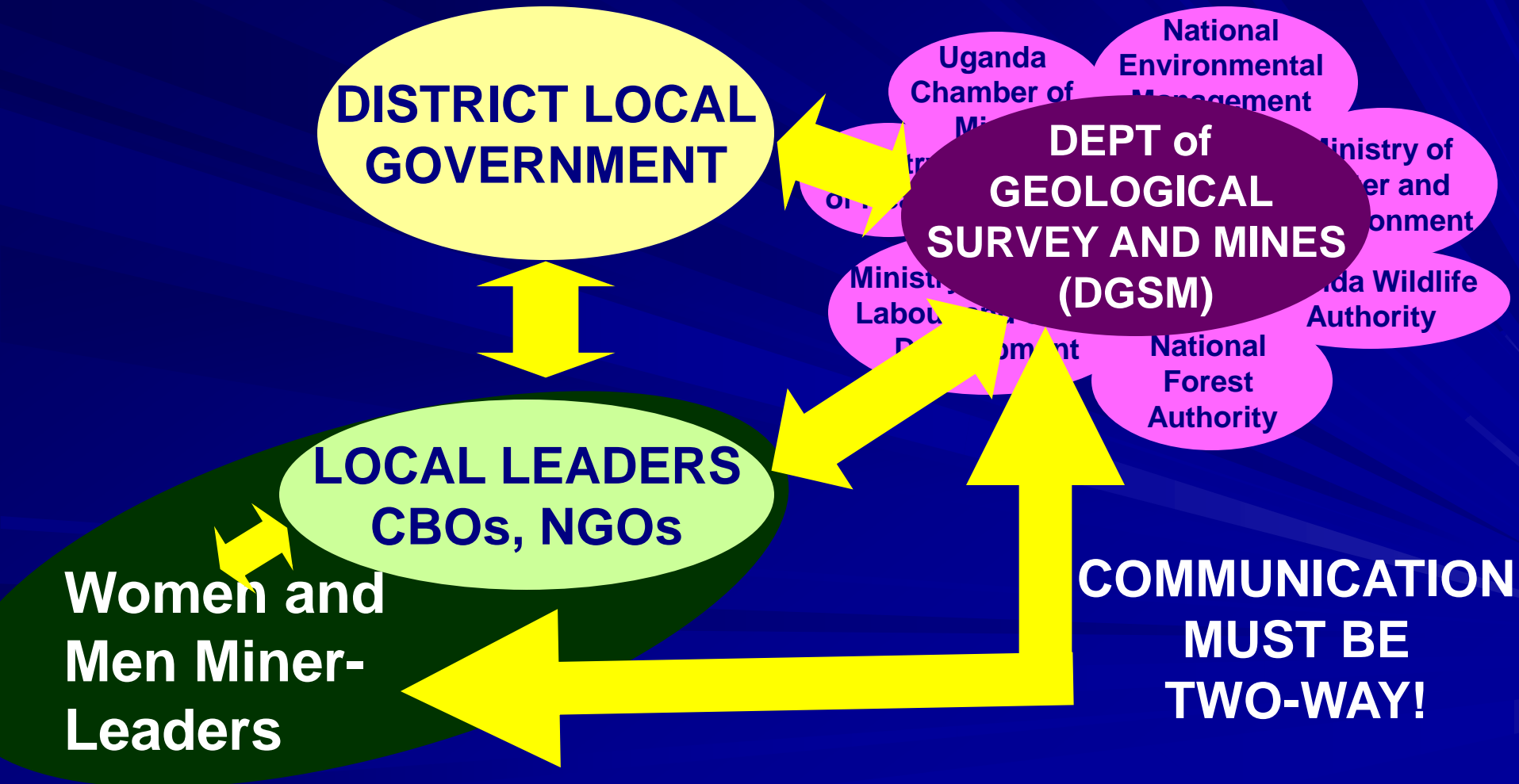
**Women and  
Men Miner-  
Leaders**

**DEPT of  
GEOLOGICAL  
SURVEY AND MINES  
(DGSM)**

Ministry of Health  
Ministry of Labour and Development  
Ministry of Environment  
National Environmental Management  
Ministry of Water and Environment  
Kanda Wildlife Authority  
National Forest Authority

Co

# SMMRP Component Two: Community Development & Small Scale Mining NETWORK OF EXTENSION SERVICE PROVIDERS





**How can SMMRP develop the  
*human capacity, motivation and  
partnerships* needed to *formalize*  
the extension services  
program???**

# SMMRP Component Two

## SMMRP Training and Awareness Campaign for Artisanal Miners.

### **1. A 22-member multi-disciplinary ASM Training and Awareness Campaign Committee (TACC) was formed.**

- 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-develop**

- **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

# TRAINING MATERIAL AND TOOLS

## NINE “CRITICAL TRAINING TOPICS” IDENTIFIED

1. **Basic Geology & Exploration.**
2. **Safe Mining Methods.**
3. **Mineral Processing for Profits.**
4. **Occupational Health and Safety.**
5. **Environmental Management.**
6. **Business Skills.**
7. **Legal Issues.**
8. **Community Health.**
9. **Community Development.**

# “SMALL SCALE MINING HANDBOOK” (415p)

## 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.**

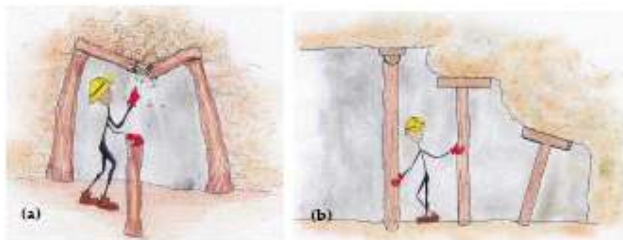


Figure 3-37: (a) Timbers should be monitored and maintained; (b) Always support areas being undercut (M. Walls, 2006)

### TIMBER SUPPORTS

Timber does break down over time and under the weight of rock so maintenance is essential! Unlike other supports, wood (timber) warns 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<sup>6</sup>.



Photo 3-22: A Well-supported Small Scale Mine in Mongolia (J. Hinton)

## WORK SAFETY & HEALTH

## 6

### 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.



Photos 6-9 to 6-11:

(a) Pit flooding has stopped work at this clay mine in Wakiso District. (Photo: V. Kato)

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

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

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 5.4.5: Water Management for more tips on how to divert, treat and manage run-off water.

**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**

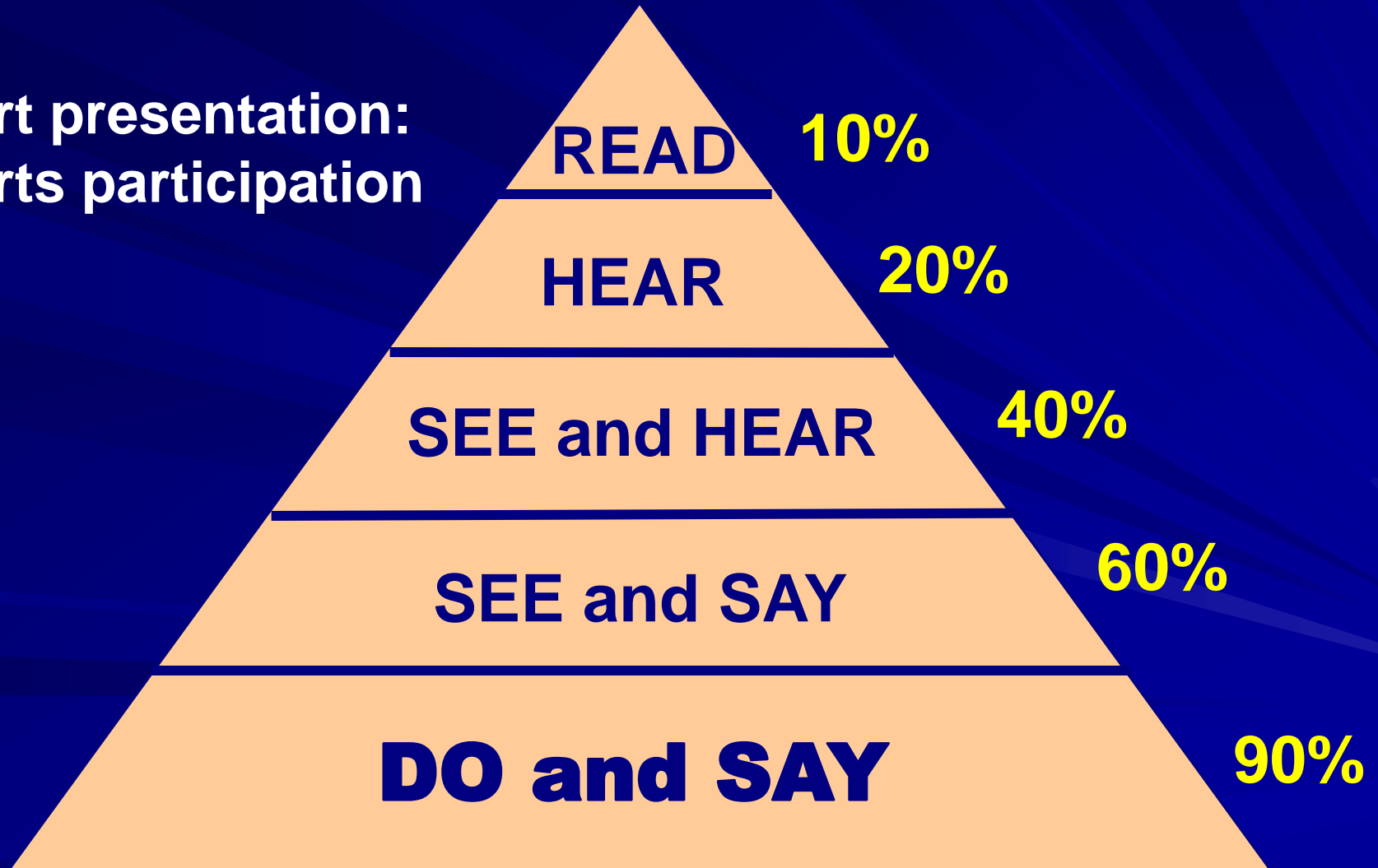
### **3. TRAINING-OF-TRAINERS (ToTs) WORKSHOPS**

- **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**

# LEARNING PRINCIPLES

Used for TACC meetings and workshops,  
ToTs, Field-based Training

1 part presentation:  
7 parts participation



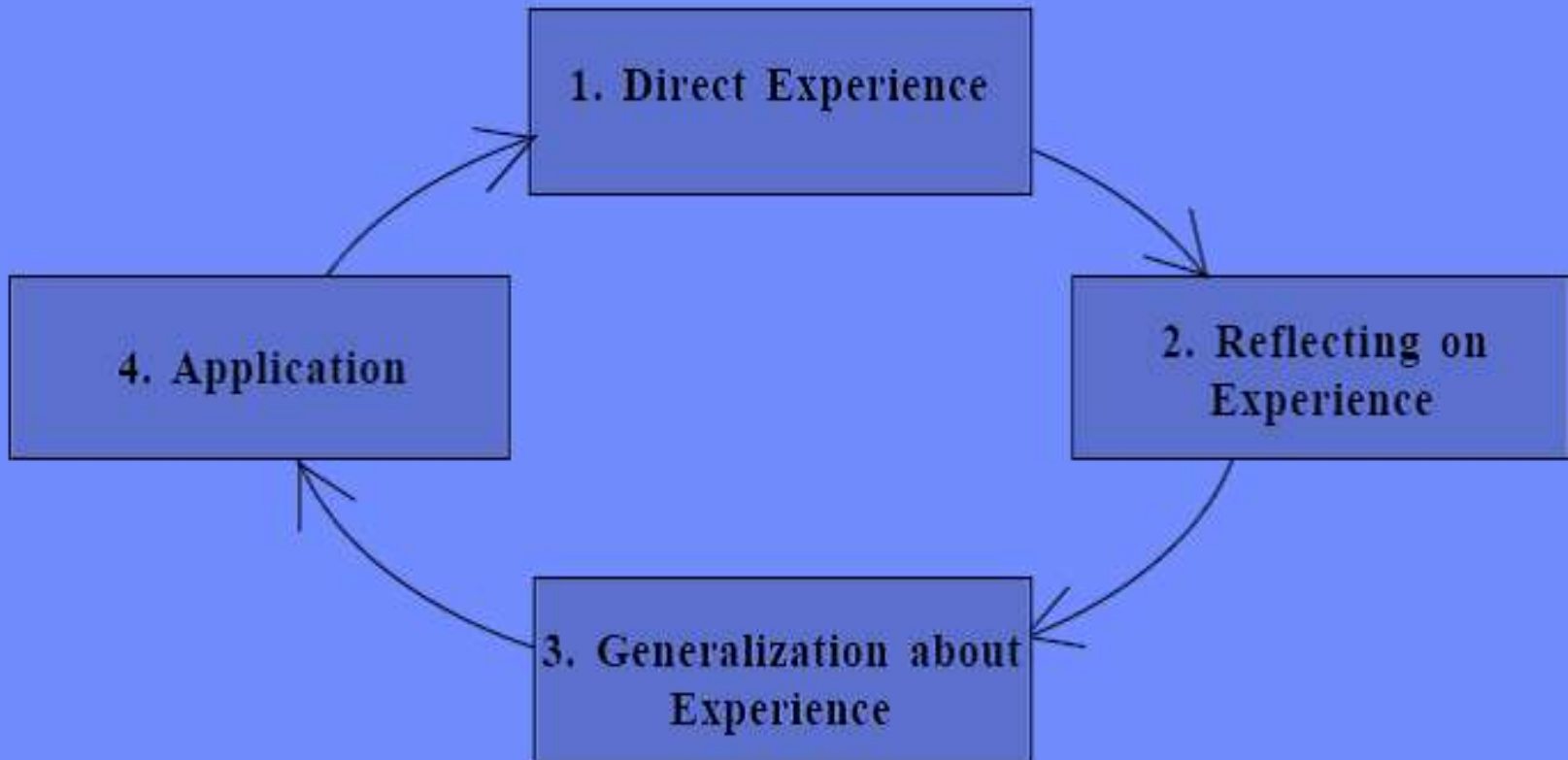
# PRINCIPLES OF ADULT LEARNING

## Adults learn best when TRAINING;

1. **Fills and immediate need.**
2. **Is participatory.**
3. **Is experiential.**
4. **Is reflective.**
5. **Provides feedback.**
6. **Shows RESPECT for the learner.**
7. **Provides a safe atmosphere.**
8. **Occurs in a comfortable environment.**
9. **Builds on participants knowledge and skills.**



# EXPERIENTIAL LEARNING CYCLE



# EXPERIENTIAL LEARNING

**Adults are able to;**

- **Do or Experience something.**
- **Think about what they did or experienced.**
- **Make conclusions.**
- **Immediately apply the knowledge and skills to themselves.**

# TWO 2-week TRAINING-of-TRAINERS



**PRACTICING  
MINERAL  
IDENTIFICATION**



**LEARNING ABOUT  
EIAs IN ASM**



**DEVELOPING A  
SIMPLE MINE LAYOUT**



**IDENTIFYING CRITICAL GENDER ISSUES  
IN ASM**

# TWO 2-week TRAINING-of-TRAINERS



**BABIES ALWAYS WELCOME!**



**PARTICIPANTS WORK IN GROUPS TO DESIGN TRAINING SESSIONS BASED ON THEIR MINERALS AND MAIN ISSUES**

## **TEAM BUILDING and INCLUSION**



**TRAINERS APPLYING THEIR KNOWLEDGE IN THE FIELD**

# 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**
  - 1. Geology and exploration**
  - 2. Safe mining methods**
  - 3. Mineral Processing for Profits**
  - 4. Occupational health and safety**
  - 5. Environmental Management**
  - 6. Business Skills**
  - 7. Legal Issues**
  - 8. Community Health**
  - 9. Community Development**

# A few examples: COMMUNITY-BASED TRAINING

## ATTITUDE:

Local partners (miner-trainers) empowered, accountable, responsible!



## TRAINED MINER-TRAINERS IN ACTION



# A few examples: **COMMUNITY-BASED TRAINING**

**ATTITUDE:  
MINING IS A BUSINESS!  
YOU ARE BUSINESS MEN AND BUSINESS WOMEN!**





# A few examples: COMMUNITY-BASED TRAINING

**ATTITUDE:  
GOOD HEALTH IS NOT  
EVERYTHING  
BUT WITHOUT GOOD  
HEALTH EVERYTHING  
IS NOTHING!**



# 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 2 fabricators also trained in each community.



# **SMMRP Component Two:**

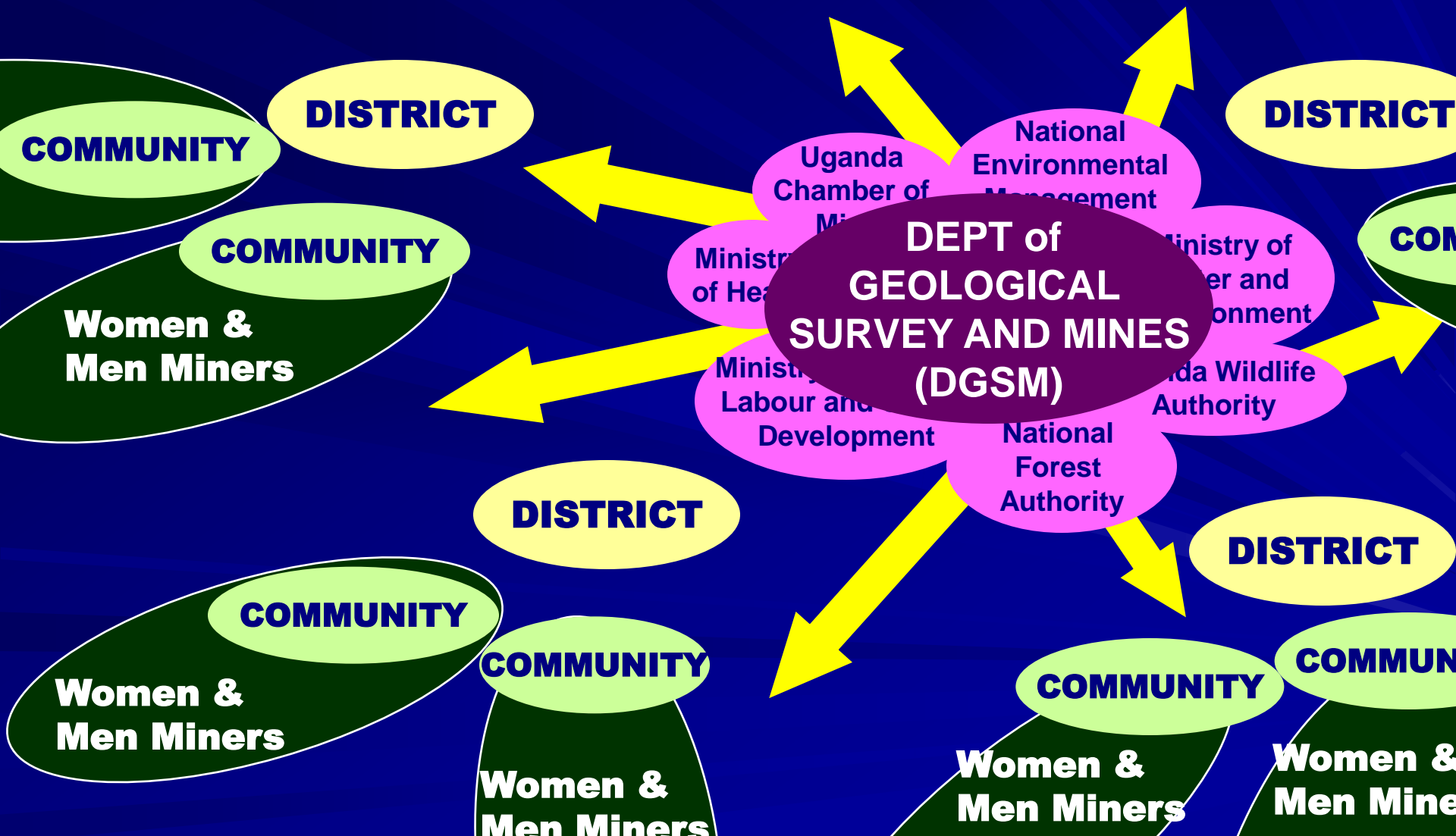
## **Community Development & Small Scale Mining**

### **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 Gender Training and Consultative Workshops**
- 4. National Multi-Stakeholder Workshop:**
  - 23 women miners, 23 man miners**
  - 16 Key agency and organization representatives**
  - 12 DGSM staff**

# WHAT IS THE WAY FORWARD?

## NETWORK OF EXTENSION SERVICE PROVIDERS



# **SMMRP Component Two:**

## **Community Development & Small Scale Mining**

### **MAIN OUTCOMES (so far...)**

- Over 80 Prospecting Licenses issued to ASGM.**
- Over 50 requests for assistance in obtaining a small scale mining license (*location license*).**
- 10 location licenses granted to ASGM.**
- Formation of a National ASM Association entirely run by ASMs and intended to foster ASM continued recognition.**
- Formation of more than 20 local ASM Associations**
- Formation of three regional ASM associations**
- Establishment of a formal network of extension service providers!**

# 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. Income diversification by taking on multiple income generating activities at ago and hence spreading the risks.

# 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.

# SMMRP Component Two:

## Community Development & Small Scale Mining

### CONCLUSIONS & LESSONS LEARNED

#### 1. Effectiveness of Local Partners/Trainers.

- 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.
- Some local trainers have conducted **self-initiated training** within their communities and report on their progress.

**LESSON:** Train a large number of women and men, identify *individual* skills and interests over time.



# SMMRP Component Two:

## Community Development & Small Scale Mining

### CONCLUSIONS & LESSONS LEARNED

#### 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 **strong** 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**

# **SMMRP Component Two:**

## **Community Development & Small Scale Mining**

### **CONCLUSIONS & LESSONS LEARNED**

#### **4. MUCH MORE WORK IS NEEDED!**

- ✓ **Many needs to address** - appropriate ASM laws, access to financing and equipment, access to markets, more technical support and training, etc etc etc
- ✓ **Promote awareness – to support *all* scales of the sector *and* development of Uganda!**

**THIS IS ONLY THE BEGINNING!**

**WE ARE HERE TO CHART A COURSE  
FOR THE FUTURE!**

# **THANKS to....**

- **Ministry of Energy and Mineral Development**
- **World Bank**
- **Dept of Geological Survey and Mines**
- **The TACC!**
- ***ALL of our partners especially ASM communities!***

**THANK YOU ALL!!!**  
***Any questions and comments  
are welcome!***