THE UNITED REPUBLIC OF TANZANIA

ARTISANAL AND SMALL SCALE MINING IN TANZANIA

ASIA - PACIFIC CONFERENCE

Ulaanbaatar - Mongolia
28 - 31, May 2013

Presenters: Fredy Mahobe and Alex Magayane
OUTLINES

1. General Overview on Mineral Potential in Tanzania
2. ASM in Tanzania
3. Efforts Done to Address ASM Issues in Tanzania
4. Development of Small Scale Mining
5. Challenges
6. The Way Forward
1.0 GENERAL OVERVIEW ON MINERAL POTENTIAL IN TANZANIA

Tanzania has over 800,000 km$^2$ of various geological terrains with potential mineral resources:

- Gold in Archaean greenstone belts – south and east of Lake Victoria;
- Gold and base metals in Proterozoic rocks in south western, southern and eastern parts of the country;
- Kimberlite pipes in central and southern portion of the Archaean craton and in proterozoic south and east of the Craton;
- Gemstones such as tanzanite, ruby, sapphire, spinel, tourmaline, topaz, scapolite, aquamarine, emeralds, amethyst, garnets (tsavorite, rhodolite, hessonite, almandite, pyrope, etc.) in Proterozoic rocks east, west and south of the Archaean Craton.
1.0 GENERAL OVERVIEW ON MINERAL POTENTIAL IN TANZANIA (cont..)

- Nickel, copper and cobalt associated with ultramafic rocks Western part of the country;
- Tin and tungsten in Proterozoic rocks North western part of the country;
- Iron ore in Proterozoic rocks southern part of the country;
- Coal in Karoo System southern part of the country;
- Evaporates such as gypsum, salts in the rift valley and along the coastal belt;
- Industrial minerals such as limestone, kaolin, diatomite, phosphates, graphite in different parts of the country.
MINERAL POTENTIAL IN TANZANIA

The United Republic of Tanzania
2.0 ASM in Tanzania

Brief Profile of ASM Mining

- Artisanal and Small Scale mining activities (ASM) have been carried out in Tanzania since the colonial days.
- They mainly involve the mining and extraction of gold, gemstones and a variety of building and industrial minerals.
- According to the Mining Act 2010: Small Scale Mining activities are those operated under a Primary Mining Licence(s) (PMLs).
2.0 Brief Profile of ASM Mining Activity (Cont....)

- In Tanzania a baseline survey was conducted in late 1996 and estimates of ASM ranged from 550,000 to approximately 1,000,000 people; with the ratio of people in the gold to gemstones to other types of minerals being 11:8:1.

- Mining, milling, processing and recovery of minerals by the ASM have been experiencing the use of rudimental equipment and technique.
2.0 Brief Profile of ASM Mining Activity (Cont....)

- 70% of ASM activities in Tanzania are conducted in gold mining.

- ASM is characterized with insufficient consideration of environmental issues,

- Mercury-gold amalgamation, commonly used in ASM, contributes to pollution and severe occupational hazards.
2.1 Small Scale Gold Miners at Work
2.2 Poor Mining (left) and Relatively improved Practice (right)
2.3 Poor practice of Processing & Recovery of Gold
3.0 EFFORTS DONE TO ADDRESS ASM ISSUES IN TANZANIA

- 2007 the Government of Tanzania established a permanent Section under the Minerals Division to oversee small-scale mining development to ensure sustainability in addressing the ASM issues in the country.

- Several initiatives have been put in place to address the Environmental issue especially use of mercury in ASGM. These include the Global Mercury Partnership of the UNEP and the GMP.
3.0 EFFORTS DONE TO ADDRESS ASM ISSUES IN TANZANIA (Cont…)

- Conducted extensive awareness and training campaigns for mining communities in Geita District on reduce/eliminate use of mercury and emissions of mercury.

- Awareness campaign materials for Technology Demonstration Units (TDU) were prepared.
4.0 DEVELOPMENT OF SMALL SCALE MINING

- Mineral Policy Statement – section 5.6:
  To support and promote development of small scale mining so as to increase its contribution to the economy by:-
  i. Developing programmes to transform and upgrade ASM;
  ii. Assist ASM to access markets and geo info; and
  iii. Protection of the environment.
Legal support:

i. Primary mining licences set exclusively for small scale mining (cheap with simple procedures);

ii. Minister demarcating out areas for small scale areas (section 15 & 16), - relinquished area must be evaluated for ASM;
Administrative Support:

i. Easily transferable and convertible (PML) licences into Mining Licences if a JV is sought; and

ii. PML are issued from the Zonal Mines Offices (8 zonal offices in the country) to reduce bureaucracy.
iii. Multi-disciplinary approach of transforming and upgrade small scale mining into organized and modernized mining by encompassing the Department of Minerals, Zonal Mines Offices and Resident Mines Offices, STAMICO, Geological Survey of Tanzania (GST), Mineral Resources Institute (MRI), University of Dar es Salaam (UDSM), VETA and SIDO
Financial Support:

i. In 2010–2012, the Government granted loans, totalling TZS 625 million to local companies to establish “hire purchase centres” so that small-scale miners may be able to access the equipment through hiring or purchasing at non-commercial rates.

ii. In 2013, in process of establishing of a Credit Facilities For Small Scale Mining Development which will be made available to qualifying small scale miners and other players in the subsector. Now in the last process of acquiring an eligible institution for provision of banking services and management of credit facilities.
5.0 CHALLENGES

(i) Illegal Mining Activities
(ii) Poverty & Illiteracy
(iii) Use of poor technology (Rudimental)
(iv) Suitable areas for mining
(v) Conflict between ASM and other land users
6.0 THE WAY FORWARD

- More awareness raising on modern technology and alternative methods in Au recoveries.
- Facilitate and support (Technical and Financial) miners by organising the formation of groups/cooperation that can be financial assisted to employ medium scale technologies.
- Reduce illegal mining by legalising ASM through identifying suitable mining areas and allocate to them.
- governments dealing with ASM need to have regional network
THANK YOU