



ICMGP 2024
CAPE TOWN • SOUTH AFRICA • 21 - 26 JULY
CAPE TOWN INTERNATIONAL CONVENTION CENTRE

The role of technology support in ASGM

MINTEK INITIATIVE

Anne Mufamadi - annem@mintek.co.za



ASGM | Gold Mining



ASGM | TYPICAL CHALLENGES

Geology and Law

- Lack of appropriate/access to information (location)
- Regulations and policies (ASGM – Surface/Underground/mine dumps)
- Formalisation/Illegal mining

Marketing

- Access to the market only via intermediaries
- Market regulations (export permit/Jewellery/ used goods/waste management license-dump size)

Technology

- Use of Mercury
- Time Factor
- Mobility
- Adoption of technology

Derelict & Ownerless Mines

- **6000+**
- **700+ ...Gold**
- **Care & maintenance (mining rights)**

Human resources

- Local economy/subsistence/sustainability
- Health & Safety related - communities

Finance

- Lack of capital
- High tax
- Limited access to investors and equity

ASGM | ASM POLICY

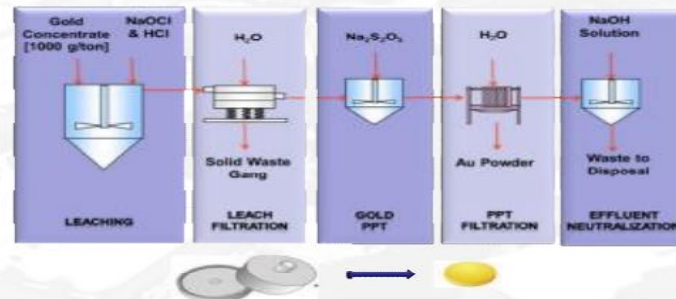
Objectives of the ASM Policy

- To create a basis for the formulation of a dedicated Artisanal and Small-Scale Mining (ASM) legal framework.
- To promote optimal and orderly exploitation of mineral resources for the benefit of all South Africans.
- To develop mechanisms to legalise artisanal and small-scale mining operations and bring them within the mainstream economy.
- To promote health, safety and sound environmental management practices.
- To facilitate entry and meaningful participation by Historically Disadvantaged South Africans (HDSA).
- To contribute towards job creation, economic growth and poverty alleviation.

ASGM | TECHNOLOGY SUPPORT

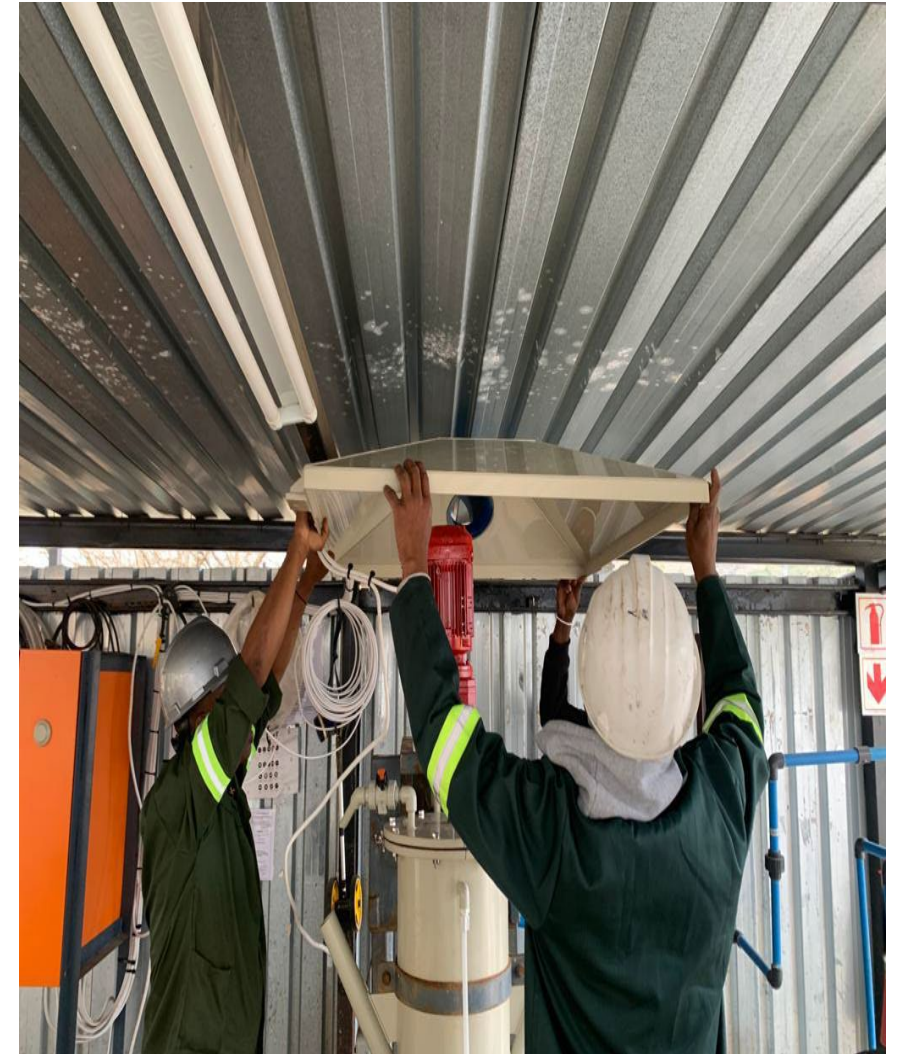
Gold Technology

- Mercury is a serious health hazard!
- iGoli – “Mercury Free” Gold extraction
- Uses pool acid & bleach
- Safer for ASM’s
- Safer for the environment



ASGM | TECHNOLOGY SUPPORT

- *Mintek Igoli Plant (Gold Processing)*
- *To eliminate the use of mercury*
- *Uses Bleach + Pool Acid*
- *Gold-containing soil*
- *Liquid form/solution*
- *Precipitation – SMBS (Sodium Metabisulphite)*
- *– solid-liquid separation - gold*



ASGM | Comments & Conclusion

- Igoli Modular Plant – Piloting Phase
- Alternative solution – reclamation/ rehabilitation
- Gold Buyers
- Cooperatives benefit
- Business Development Tool

However (challenges)

- Quick & easy
- Easy to move around
- Formalisation vs visibility

ASGM | Gold Mining

THANK YOU