

POVERTY ERADICATION AND SUSTAINABLE LIVELIHOOD: FOCUSING ON ARTISANAL MINING COMMUNITIES IN ETHIOPIA

Based on UNDP/UNDESA sponsored consultant study
and Validation Workshop, and Personal experiences

by Gesit TILAHUN (1) and Demile YISMAW (2)

(1) Expert, Mineral Operations Department, Ministry of Mines, Ethiopia

(2) Ministry of Finance & Economic Development, Ethiopia

1 - BACKGROUND: THE COUNTRY CONTEXT

- Location: East Africa, area 1.1 sq.km. Pop. nearly 65 million, 3% annual increase, second to Nigeria in sub-Saharan Africa.
- Government: Federal Democratic Republic, 9 National regional states, 2 Administrative Cities including Addis Ababa, the capital.
- Economy: Mainly agrarian: 45% GDP, 85% employment, 90% foreign exchange earnings. Industry 11%, Services 44% of the GDP. Contribution of Mining to GDP is low. Generally, a poor nation- 44% under absolute poverty.
- Natural resources (significant portion of arable land, significant surface and ground water potential, different climatic zones, decent and hard working people).
- Mining: gold, gemstones, building stones, edible salt, clays, etc. mining dates back to biblical times. Highly prospective geological environment: (Precambrian-Recent) with great potential for precious minerals, base and rare metals, industrial and construction minerals, geothermal, mineral water and hydrocarbons. (Figures: Geological map, Mineral resources map, and some operating mines).

2 - ASM COMMUNITY OVERVIEW

2.1 - SSM Vs ASM, definition: some difference/MMSD def.

- The Mining code recognizes artisanal miners.
- Supports endeavors to upscale and upgrade artisanal miners to small-scale holders.
- Artisanal Mining (AM)- mining operation conducted manually by non-mechanized mining methods by Ethiopians. Vertical excavations < 15 m. (Art 2.2 Proc 52/93). Hg not allowed (Art 26.6 Reg. 182/94).
- Small-Scale Mining (SSM): Based on the Run-off-mine ore (R.O.M) for each mineral type Ar2, Reg. 182/94. E.g. Primary Gold Mine R.O.M. > 75,000 t.p.a is large scale. (UN study, 1972 > 50,000 t of unproc. mat. – large-scale). Some exceptions.

- The Law requires mining at small scale requires proper studies, and implementation of mining methods. (Figure: some operating mines).
- Thus, the scope of the discussion must be limited to: only Artisanal Mining proper (AM).
- Restrictions: use of chemicals, machineries and tunneling and mining > 15 m depth, vertically.
- Permitted to Ethiopians, requiring little capital out lay; hand tools like crow bar, hammer, batia, etc.
- Types of AM in Ethiopia: gold and platinum, quarry operations which include ignimbrite, limestone, dolomite, silica sand, opal, sapphire, olivine, garnet, amazonite, citrine, amethyst, etc., gypsum, pumice, etc.; clay (pottery making); and salt extraction rock salt, evaporation of brine from crater lakes, sulfur-dofan, diatomite, etc.

2.2 - Distribution of Artisanal Miners, Mining sites

- About 500,000 people are engaged in AM.
- Southern Ethiopia: Adola, Hagera Mariam, Moyale, etc. mainly in gold panning, and gemstone. Southwest: Akobo basin, Gambella.
- West: Birbir, Dabus, Dedessa basins, Assosa, Kurmuk, Gizen etc mainly gold, platinum, Ambo-sandstone.
- North: Axum, shire, Adwa, Adigrat, Makelle, etc. mainly gold, and construction minerals. Gondar: Opal.
- North east: Afar, mainly salt, sulfur.
- Eastern and central: Diredawa, Harrar, Jijiga, Modjo, Zeway-Meki, Debre zeit, Nazret, mainly construction materials. Ogaden in Somali region- salt. All around Addis and other towns many quarries producing ignimbrite, basalt, scoria, brick clay, etc.
- North Shewa: Mezezo area, mainly opal.
- Infrastructure is scarce or absent in gold, and other AM mining areas, better for construction minerals.

3 - MAJOR CHARACTERISTICS OF ARTISANAL MINERS IN THE CASE STUDY SITES

3.1 - Studied areas

3.1.1 - Hayadima

- Located in Borena Zone, Oromia. 20 km SW of Shakisso mining town and the district capital.
- Population of the village: 18,000. 55.6% Gujji Oromos, indigenous, remaining are migrants looking for gold.
- Economic activity: farming & cattle rearing, gold mining as alternative source of income.
- Land use: 65% forest and farm land including grazing, 20% mining area, 15% settlement area. Currently gold panning at 7 main sites (Location map).

3.1.2 - Senkelle

- Location: west Shewa zone, Oromia region, 130 km west of Addis Ababa, the capital.
- Total population of the Kebele about 2,488; 55% female.

- Major economic activity: mixed farming (crops / livestock).
- AM is conducted by “poor” people working for the license holders (L.H.) as daily laborers earning 5-6 Birr/day. 3 main sst quarry sites and > 20 L.H. operating at the main quarry.
- Daily wages of the AM is not changed for the last 20 years (SLA/PRA data) - surplus labor.

3.2 - Impacts of Artisanal Mining

Social impacts of the AM: congestion of the area by massive migration: gold miners (Hayadima) increase cost of services, commodities; Spread of disease; HIV/AIDS, typhoid, STIs lack of adequate health facilities.

Environmental Impacts of AM:

- Deforestation.
- Loss of wild life.
- Land degradation: irregular pits, indiscriminately dumping wastes-loss of topsoil, subsidence of the land surface as result of underground excavation.
- Creation of stagnant ponds- outbreak of MALARIA, water-borne diseases, etc.

Economic Impacts of AM: the country loses about 3 t of gold per year-informal, defamation of opal- more damaging.

3.3 - General Characteristics of AM

Artisanal Mining is found to be:

- Unproductive;
- Uncontrolled;
- Not safe, prone to fatal accidents, diseases;
- Uneconomic, wasteful;
- Unhealthy and polluting and damaging the environment permanently in every aspect: soil, vegetation, water, animals, etc.

Positive Impacts of AM: the study areas: Senkelle- the sandstone is highly decorative building stone in Addis and nearby cities; its relative proximity not scarcity of the material makes it wanted. Tigray Wukro, Adigrat, Abi Adi, Abay Gorge, Harrar, and other parts of the country huge potential. Hayadima: positively impacts service providers, temporary job opportunity and markets for farmers.

3.4 - AM Community Situation as Analyzed through the SL Approach

- The SL Approach: a consultative process adopting Participatory Rural Appraisal (PRA) method.
- Involve community - to address the root cause of the problem and to reach major conclusions and recommendations. (Explanation on the Approach and its principles behind)

3.4.1 - Major Problems of AM

- Identified problems of AM include: limitation of exploitable areas; exhaustion of high grade and easily exploitable sites.

- Lack of infrastructure; lack of water.
- Lack of proper market outlet.
- Poor recovery.
- Population pressure in case of Hayadima.

3.4.2 - Problems caused by AM

- Wastage of non-renewable mineral resources.
- Environmental degradation and pollution.
- Expansion of diseases, HIV/AIDS and other STI, water borne diseases, tuberculosis, and malaria outbreak.
- Causing farming less productive; attracting farmers seasonally- in wet season.
- Increasing school leavers.
- Flourishing the illegal trading of gold for many years and now, and sporadically gemstones presently; in particular opal, olivine, sapphire, ruby, garnet, peridot, amazonite, amethyst, etc., in the north, south, and central parts of the country. activities-contraband.
- Major concern as a MOM personnel: the soil erosion in the high land areas-opal miners, Tertiary high land volcanics-Shewa-Gondar, and now similar gemstones in Tigray. AM mining-and handling- defamation of the opal nodules in the international market: damaging its reputation-sensitive.

4 - RECOMMENDATIONS TO TACKLE THE PROBLEMS

Consultant recommendations were analyzed on the national validation workshop:

Objectives of the workshop were

- Awareness creation on SLA;
- Validation and building consensus on the finds and recommendations of the study;
- To develop recommendations of the study, why problems and issues were not tackled, what are the impediments?

4.1 - Consultant Recommendations on the study areas

Hayadima

- Improve method of production through training, provision of better tools, financial support and basic social services, and infrastructure development.
- Diversify other off-mine activities: agriculture, handicrafts, trade, goldsmiths, processing-value adding; Study the situation of recent migrants, excess (migrated after 1991).

Senkelle

- Increase quality of dimension stone by introducing: semi-mechanized machines for cutting, splitting and polishing- creates more employment and value adding.
- Develop off-mine activities: farming by irrigation, grape vines, vegetable, dairy, cattle rearing.
- Develop other mines: gypsum (stucco) for plastering, clay for bricks, and roof-tiles, lime.

4.2 - The Way Foreward: Policy and Strategy on livelihood improvements of the AM

4.2.1 - Policy Issues

- Due recognition to AM within the frame work of policy, strategy, and program formulation.
- Institutional support and services- to make it more productive, and enhanced towards poverty alleviation. Support AMs where they are if feasible.
- Promoting broad based economic growth with equitable income dist.
- Protect the resources through making AM more effective in their production.

4.2.2 - Strategies

- Promoting investment in and around AM activity areas, availing loans or credit facilities for producers and traders.
- Creating alternative areas of productive employment that can provide sustainable livelihoods to AM including:
 - . Crop production
 - . Natural resources conservation: soil, water, etc.
 - . Small-scale industries: SS agro-industries, SS mining (e.g. bricks, roofing) through micro-financing facilities.
- Organizing AM into cooperatives.
- Capacity building through training and education including saleable skills to enhance self-employment/employment.
- Choosing appropriate technologies to enhance production and sustainable livelihoods in diversified activities.
- Establishing appropriate standards.
- Establishing procedure & appropriate standards (health, safety etc.), guidelines.

4.2.3 - Short and medium actions (1-5 years)

- Establish conducive legal and institutional framework for AM.
- Cooperatives, technical and financial assistance, Skill training program.
- Study other resources, mineral potential.
- Expand basic services; health, HIV/AIDS prevention, nutrition, childcare, education.
- Take measures against illegal mining, and trading in particular gold, and gemstones.
- Work together with all stake holders who are interested to participate in poverty eradication and reduction.

4.3 - Major finds of the Workshop

- All the stake holders showed interest to participate in the poverty eradication through SL approach. Awareness has been created on the mineral potential and impacts of the unregulated AM sector.
- The cooperative commission mission identified.
- More affected areas by poverty, environmental degradation could have been chosen in the case of non-metallic minerals studies.
- Up-scaling and upgrading, AM to SSM, and regulating is necessary by providing equipment, training, finance etc., AM its present form is wasteful, unhealthy and damaging to the economy, the people, and the environment.

- AM needs attention as it can be good source of foreign exchange, currently involving more than 500,000 people at the moment.

4.4 - Key Stake Holders

4.4.1 - Federal Government Institutions

- Ministry of Mines;
- Ministry of Labour and Social Affairs;
- Ministry of Agriculture;
- Ministry of Federal Affairs;
- Ministry of Finance and Economic Development;
- Cooperatives Commission.

4.4.2 - Regional Government Institutions

- Oromia Bureau of Mines and Energy;
- Oromia Bureau of Finance and Economic development;
- Woreda (District) Administration;
- Peasants Associations representatives from case study areas.

4.4.3 - NGOs, Donors and Private Organizations

- United Nations Development Programme (UNDP);
- World Bank;
- Ethiopian Evangelical Church Mekane Yesus (EECMY);
- SOS-Sahel International (UK);
- Alek Terazzo PLC.

5 - SPECIFIC TEAMS EXPECTATION FROM THE REGIONAL PROJECT AND WORKSHOP

- The lack of technology appropriate to the level of AM operations needs consideration.
- Ethiopia practiced SSM project, it was a good beginning but discontinued. Can it happen again with the SLA. No more studies. lets move towards implementation.
- More funds, proper attention from all the big “stake holders” the current organizers, the NEPAD, NGOs, IGOs towards sensitizing governments to give more attention to the sector and assisting them by providing the necessary inputs.
