
IMPACT ASSESSMENT AND THE MINING INDUSTRY: PERSPECTIVES FROM TANZANIA

By

Prof. Raphael B.B. Mwalyosi

**IAIA'04, Vancouver, Canada
April, 2004**

Abstract

Despite the absence of EIA legislation and institutional framework, impact assessment has been applied in Tanzania largely on ad-hoc basis for over 20 years. Since the first EIA in 1980s, several have been undertaken including in the mining sector. In Tanzania, significant mining started in the 1990s following the trade liberalization policy. Gold mining is concentrated in three main areas: Lake Victoria greenstone belts; Mpanda mineral-field and Lupa goldfields. Diamonds have been mined for over 50 years and more than 300 kimberlite pipes extend from Mwanza through Shinyanga to Tabora and Singida. Colored gemstones are also mined extensively. In the past, environmental management in mining has been hindered by lack of coordination, insufficient funding and expertise. As a result there has been uncontrolled extraction of minerals and the use of unsafe mining methods and severe environmental damage and appalling living conditions in the mining communities. The challenge associated with the mining sector today in Tanzania is ensuring sustainability and integrating environmental and social concerns into mineral development programmes. Sustainable mining development requires balancing the protection of the flora and fauna and the natural environment with the need for social and economic development. In view of these challenges, the government's policy for the development of the mining sector aims at attracting and enabling the private sector to take the lead in exploration, mining development, mineral beneficiation and marketing. The role of the public sector will be to stimulate and guide private mining investment by administering, regulating and promoting the growth of the sector. To address the problems associated with mining, the Government's policy is to reduce or eliminate the adverse environmental effects of mining, improve health and safety conditions in mining areas, and address social issues affecting local communities. EIA is recommended as one of the major tools for achieving these solutions. Although EIA will soon be a legal requirement in all development activities including mining, it may take many years to achieve the set objectives since the necessary EIA culture and relevant institutions to coordinate and manage the mining environment have to be built.

1. Introduction

Mining, especially large-scale mining is one of the main growing industries in Tanzania. The mining sector has already recorded an impressive growth of around 17% a year between 1997 and 1999. Estimates show that mining will contribute more than \$ 1 billion a year and contribute over 10% of the GDP.

Over the past decade, the global mining industry has undergone dramatic changes that may have far-reaching implications for Tanzania. Like many other developing countries, Tanzania has embarked on wide ranging structural reforms aimed at opening up their economies to foreign trade and investment. With these trend-setting developments, and in order to take advantage of the opportunities offered by renewed interest in mining in Africa, the mining sector in Tanzania decided to make a smooth transition towards a modern and viable mining industry.

2. New Mining Sector Policy and its Implementation

Undoubtedly, Tanzania is well endowed with a wealth of minerals; gold, copper, zinc, diamonds and tanzanite, to mention a few. The government wants to capitalize on these natural riches. Apart from contributing to the national economy, increasing the GDP and foreign exchange earnings, a major objective of the mining sector policy in Tanzania is to alleviate poverty in the country by creating gainful and secure employment in the mineral sector and provide alternative sources of income particularly for the rural population and to ensure environmental protection and management (United Republic of Tanzania, 1997, p8).

To attract investors, the Government of Tanzania embarked on economic reforms and restructuring between the mid 1980s and the 1990s. These reforms marked a clear shift in favour of private sector development and market-oriented economic management. In these new reforms the role of the government has been re-defined from that of owning and operating the mines to that of only providing policy guidelines, stimulating private investment and providing support for investment. The

reform is in line with the Mineral Policy of Tanzania 1997, Mineral Act 1998, and Fiscal Package 1998.

Thus, since 1998 Tanzania has been opening one gold mine every year. Currently the country has mining investment worth over 1 billion US dollars and boasts six modern gold mines in operation producing 1,500,000 ounces of gold worth more than 400 million US dollars annually (Mbilinyi, 2004). For example, there are the South Africa's AngloGold and London-based Ashanti Goldfields, sharing the Geita deposit. There is also Resolute Golden Pride Mining Company in Nzega. It is expected that early next year (2005) one more gold mine would be brought into production making a total of 7 modern gold mines in seven years. There is also the old Diamond mining in Mwadui (see Map). The production of gold enabled the investors to pay taxes to the Government to the tune of 47 billion Tanzania shillings by 2002 compared to only 2.75 billion Tanzania shillings in 1997 (ibid).

3. Status of EIA in Tanzania

Since the first EIA process undertaken in Tanzania in 1980, EIA practice has evolved slowly. The adoption of national EIA policy and legislation has been even slower. To-date, about 100 EIA processes may have so far been undertaken in Tanzania. Most of these have been undertaken to fulfill donor requirements.

In recent years, there have been signs of emerging political interest in EIA in the country. In 1995, a Tanzanian delegation signed a communiqué of highlevel ministers pledging affirmative action to promote EIA as a planning tool (Goodland *et al*, 1995), suggesting a growing commitment to the EIA process in the country. Recently, the President of Tanzania re-affirmed his commitment to pledges made at the 1992 UNCED (WCST/IRA/Agenda, 1996). Most recently (2000) the Office of the vice President commissioned an institutional and legal framework study for environmental management and a draft bill on this is soon to be submitted to Cabinet.

Despite the slow progress at national level, there have been some notable initiatives to incorporate EIA at sub-national level. Thus, national policies on the wildlife sector now require the preparation of an EIA for all developments and activities within and adjacent to protected areas (TANAPA 1994, Wildlife Division, 1996). Also, the Tanzanian Electric power authority (TANESCO) has made EIA mandatory for all power generation projects and for the construction of transmission lines. A number of sectoral policies, such as those for mining, tourism, land and energy, advocate the use of EIA in project planning. However, these policies or legislative provisions are yet to be supported by guidelines, and there has been limited compliance.

The Mineral Policy of Tanzania (1997) recognizes the need for sustainability of mining through integration of environmental and social concerns into the mineral development programmes. Sustainable mining is seen as that which balances the protection of the



Map 1. Large-Scale Gold Mining Sites in Tanzania

flora and fauna and the natural environment with the need for social and economic development. To address the problems associated with mining, the policy is to initiate actions to: (a) reduce or eliminate the adverse environmental effects of mining; (b) improve health and safety conditions in mining areas; and (c) address social issues affecting women, children and local communities.

Draft national EIA guidelines exist and are being incorporated in an EIA Law being prepared. The draft bill proposes the establishment of a national Environmental Regulatory Body (ERB) - the National Environment Management Council (NEMC), which will oversee Environmental Units (EUs) at district and sectoral levels. The ERB and EUs would be responsible for screening projects and the review of EIA reports. The ERB will also be consulted during scoping, although this will be the responsibility of the proponent. ERB will also be responsible for approving terms of reference prepared after scoping.

In the absence of a robust institutional and legislative framework, it is perhaps not surprising that the quality and effectiveness of EIA in Tanzania has been highly variable). In a study on the performance of EIA in Tanzania Mwalyosi and Hughes, (1998) found the following weaknesses:

- Although EIA is sometimes perceived as impeding development, there is a widespread desire among Tanzanians to adapt EIA to the national context.
- EIA processes are initiated too late in the project cycle to influence project design and in many cases, EIAs are undertaken as 'stand alone' processes. There is almost no integration between EIA and project design.
- Little attention is given to involving key stakeholder groups, especially the local people.
- EIAs are often under-assessed and the expertise employed is often inappropriate, while EIA review is *ad hoc*.

-
- Foreign expertise dominates the EIA industry with little use of nationals (Tanzanians), which in the long term impedes EIA national capacity building.
 - In general, EISs are descriptively strong, but analytically weak and do not consider cumulative impacts; and few assess project alternatives. Compliance issues are often unclear in the EISs and the quality of EIAs is often not of a good standard.
 - The quality of EIAs appear to be constrained by resources, time limitations, and lack of political commitment.
 - The institution likely to be responsible for managing the EIA process in Tanzania - the NEMC - has so far fulfilled an advisory role, since it lacks legal powers for enforcement. This weakness is aggravated by the shortage of relevant expertise and its lack of representation at district and local levels.

4. EIA and Mining in Tanzania

Relatively comprehensive EIA statements have been prepared before mining commenced in all major gold mining projects in Tanzania. The EIAs are usually undertaken by expertise from within Tanzania and abroad. The EIA processes and statements are reviewed by an established interdisciplinary review panel chaired by the national EIA Authority - NEMC.

Apart from undertaking EIA, all mining companies are required to furnish general management plans (GMPs) as a compliance requirement. GMPs are closely monitored for air, water and environmental quality.

Since 2001 these companies compete annually for the "Presidential Environmental Excellence Awards" which also involve non-mining companies in Tanzania. Environmental excellence in mining includes issues related to quality of process management; and mine socio-economic impact on the surrounding local communities and; environmental management of the mine site including decommissioning. The first Award in 2001 went to Resolute (Tanzania) Ltd. – Golden Pride Project located in Nzega.

Geita Gold Mine (GGM) also demonstrates environmental excellence by achieving the ISO14001 international standard for environmental management. The basis for GGM's certification is its established environmental management system.

5. Socio-Economic and Environmental Consequences of Mining in Tanzania

5.1 Compliance to national rules and regulations

Most of the large-scale mining companies comply with national rules and regulations of the mining sector but they are reluctant to go beyond compliance because this is not a legal binding requirement. The mining companies argue that they pay all the required taxes and royalties to the government and therefore it is the government's responsibility to return some of the mining revenues back to the local communities for development. Thus, little is done to help the surrounding communities despite the fact that they are the most impacted by the mining activities.

5.2 Impact on the local economy

Large mining investments increasingly open up remote areas where local communities are often outside the economic mainstream of the national economy. In Tanzania there is limited institutional capability to manage the social and economic implications of such sudden growth of investments in remote areas. Any local income from mining is mainly through auxiliary activities such as sale of food, operating restaurants and sale of soft drinks and alcohol, etc.

5.3 Impact on the national economy

As noted in Section 2 above, the production of gold enabled the investors to pay taxes to the Government to the tune of 47 billion Tanzania shillings by 2002, 17 times more than in 1997. This is still less than 15% of the mining investment over the five years. At this rate, and according to the observations by Tanzania's Minister for Energy and Minerals recently, the Sector has not made any significant contribution to the alleviation of the country's poverty. It will take many years for the impact of mining to be felt.

5.5 Displacement of local communities and compensation

In a number of cases, the poor local communities have been forced off their land by mining projects. Needless to say, local communities are least empowered in demanding fair compensation. In some areas mineral officials have forced small-scale miners to accept and sign value agreements with large-scale miners thereby losing their properties by being bought off by mining companies many of them at very low prices (MRSDSAP and ERA 2001). Such pressures magnify the extent of conflicts over resource use.

5.6 Loss of farmland

Expansion of mining in farmland increases environmental destruction risks, especially in areas that are already vulnerable such as the Lake Victoria catchment area including Shinyanga, Mwanza and Musoma Regions. The local communities in these regions are largely dependent on crop and livestock production for their livelihoods. The long-term implications include accelerated food insecurity, generation of a landless class, increased poverty, and rapid environmental degradation (including vegetation and topsoil loss).

5.7 Establishment of unplanned settlements

Many mining projects are relatively short-lived. Thus, it is no accident that "ghost towns" are a common problem associated with mining sites. Even where a mine proves profitable over decades, rather than years, the profits of mining tend to be deployed in opening up new prospects, rather than consolidating existing ones.

5.8 Employment levels

Mining is expected to create badly needed jobs, help build schools, roads and other needed infrastructure in the surrounding rural areas. Kulindwa et al. (2003) showed that approximately 20-60 people are employed per claim title. The number of employees tends to increase during the peak production period and shrink during the low season. GGM, the biggest mine in East Africa to date, boasts 2,400 employees (of which 93% are Tanzanian nationals). This makes GGM one of the

biggest private sector employer in Tanzania. Nevertheless, employment does not necessarily fall within the locality or even within the same district. Rather, employment cuts across the nation suggesting that mining employment has an impact at national level rather than on local communities.

When claim holders enter into agreements with large-scale miners they are restricted to a few development activities within the holdings. In many cases such restrictions have affected negatively the employment of members of the village communities in mining areas.

5.9 Appropriate technology

Most of the mining technology applied by large-scale mining companies is open pit technology. Out of 6 large-scale mining companies, currently only one uses underground mining technology. Open pit areas become permanently damaged and cannot be put to any economic or social use.

5.10 Lack of coordination

Almost all mining proponents indicate a commitment towards social and economic development for the surrounding communities. Sometimes a budget is provided in the report. However, little is known about whether these commitments are fulfilled. This is partly because there is no proper follow up by the relevant authorities due to low capacity and lack of mechanisms to force them to abide by their commitments. Dealing directly with local communities is difficult as there is no proper institutional set-up – this creates high transaction costs for investors and may deter them from helping the local communities. Often investors have used local NGOs where they exist to try to channel investors' support to the local communities. Where these NGOs are not in place investors are reluctant to provide money direct to the local authorities for reasons that include low capacity and corruption.

5.11 Land use conflicts

Many disputes between claim holders and smallholder farmers have been reported in Tanzania. Farmers often plant perennial crops in areas with title deeds. Sometimes claim holders are advised by mineral officials to allow smallholder

farmers to plant seasonal crops in areas that are temporarily not operating, but farmers plant tree crops. Both annual and perennial cropping cause disputes particularly when the claim holder intends to mine the planted areas (MRSDSAP and ERA 2001).

5.12 Movement of people

Movement of people into mining areas is another area of concern. Kulindwa et.al., (2003) showed that 79% and 70.6% of the respondents in Mererani and Mwanza mining areas respectively, moved in between 1985 and 1995 and were mostly former farmers and civil servants. These two sectors contribute over 50% of mining employees. This is not very good news as it seems mining relocates people rather than benefiting unemployed people.

Mining projects are also accompanied by social problems such as prostitution and sexually transmitted diseases (STDs) have tended to increase following the intensification of mining activities (*bid*). The risk of incidence has been high in mining communities.

6. POLICY IMPLICATIONS

6.1 Shortcomings in the legislation

The Mineral Sector Policy is seen to be an important tool for alleviating poverty in the country by creating gainful and secure employment in the mineral sector, by providing alternative sources of income particularly for the rural population and by ensuring environmental protection and management (URT 1997, p8). Although there are strategies set to fulfil this goal, mining companies do not want to undertake activities beyond compliance requirements. Obviously, Improving the social services and livelihoods of the neighbouring communities is a pre-requisite for sustainable mining. This calls for review of the mining laws including EIA.

6.2 The need for SEA

Most of the mining projects are located within the Lake Victoria Basin yet every project has had a separate EIA. Such assessments are likely to miss out the cumulative impacts associated with mining in the basin. Although the mining projects are located in specific localities (districts), there are associated impacts such as employment, communicable diseases etc. that cross district and regional boundaries. Strategic environmental assessment (SEA) would have assisted strategic decision-making, including spatial planning, improving the quality of policies, plans and programmes, thus contributing to more sustainable development.

In fact, linking spatial planning with SEA is crucial for sound development, and provides an opportunity to introduce sustainability principles into decision-making. This would require integration of environmental, social and economic issues in the mining projects in Tanzania.

7. References

Goodland, R; Mercier, J-R; & Muntemba, S (eds.) 1996. *Environmental Assessment (EA) in Africa: A World Bank Commitment*. Proceedings of the Durban, World bank Workshop, June 25, 1995. The World bank, Washington.

Kulindwa, K., Mashindano, O., Shechambo F and Sosovele H (2003): Mining for sustainable Development in Tanzania. Dar es Salaam University Press

MERSDSAP and ERB (2001): Macroeconomic reforms and sustainable development in Southern Africa Project (MERSDSAP) in collaboration with Economic Research Bureau (ERB), University of Dar es Salaam. A training workshop for Honorable Members of Parliament, Economic and Finance Committee, Bunge Offices , Dar es Salaam. Sponsored by German Ministry of

Foreign Affairs, CIDA, DANIDA, European Commission, GTZ, SDC, WWF-US/MPO.

Mwalyosi, R. & Hughes, R (1998). The performance of EIA in Tanzania: an assessment. IRA Research Paper No. 41/IIED Environmental Planning Issues No. 14.

TANAPA (1994). National Policies for National Parks in Tanzania. March 1994

United Republic of Tanzania (1997). The Mineral Policy of Tanzania. Ministry of Energy and Minerals, October 1997

WCST/IRA/Agenda (1996). Proceedings of the Workshop: Putting the Environment on the National Agenda held at the Kilimanjaro Hotel, Dar es Salaam, July 24 1996. Wildlife Conservation Society of Tanzania, Institute of Resource Assessment, and Agenda for Environment and Sustainable Development.

Wildlife Division (1998). Policy for Wildlife Sector. Ministry of Natural Resources and Tourism. URT.