

## CHAPTER EIGHT

### MINING

#### Situation Analysis

Zambia's substantial mineral wealth includes metals, gemstones, industrial, agro, and energy minerals. The most developed of the minerals are the metals followed by gemstones. Nevertheless, the full potential of the metal group has not been fully realised. In the past decades, the mining industry had been characterised by low output, managerial shortcomings and lack of investment.

Among the metals, copper and cobalt will continue to be the backbone of the economy in the foreseeable future and as such it was important that the efficient and productivity of the sector be assured through investment. The copper ore sources in former ZCCM property have the economic potential to sustain the current production levels in the next 10 to 15 years. In addition, there is a copper ore body at Lumwana, which is outside the current mining area and may be the largest copper resource with approximately about one million tonnes grading about 0.7 percent copper.

The gemstone sub-sector, which includes emeralds, amethyst, aquamarine, tourmaline, and a number of other varieties, has great potential and can be a major contributor to the economy. The gemstone occurrences, by virtue of their distribution and size are exploited mostly on small-scale basis. The sub-sector has been adversely affected by excessive illicit trafficking.

In order to boost and make the mining sector viable, the government decided to embark on the implementation of a comprehensive economic restructuring programme aimed at promoting private-sector led development initiatives through: production of the geo-science maps of the country to enhance investment interest; increased technical and professional human resources in the Ministry of Mines; decentralised technical services and facilities; privatisation of state owned mining companies; creation of an enabling environment through appropriate legislation (investment code) to attract private investment in both large and small scale mining; provision of institutional support to enhance mining, processing and marketing of gemstones; and provision of information on availability and uses of agro, industrial and building minerals.

The mining sector envisions a private sector driven industry, which will encourage the development of new mines. It is also envisaged that the development of this sector will subsequently engender the development of local industry/business to support the sector as well as the development of infrastructure that may attract other investments around the mining areas such as agriculture, commerce and trade etc.

The mining sector is one of the key sectors that would enhance economic growth. There is optimism for the improved performance of the sector due to re-capitalisation of the mines as a result of privatisation. In addition, there has been an increase in the demand for copper and cobalt on the world market and this may positively influence prices and production. Consequently, the industry is likely to be revitalised through

increased investment, technology and reduced production costs. This may result in increased metal outputs and operational profits.

Therefore, mining sector, takes into consideration, both the direct and indirect factors that may positively influence the reduction of poverty levels. These factors are presented in form of programmes and strategies in subsequent sections.

### **Relationship Between the Sector and Poverty**

Poverty is directly linked to aspects of lack of fulfillment and protection of human rights. Some of the human rights relate to social economic, environment and cultural rights, which have a direct impact on poverty levels.

### **Large scale Mining**

The transformation of the sector from state control to private sector driven has had impact on poverty levels. In the short term, the economic and social outcome of this transformation resulted in the sharp decline in employment, income levels and basic social services of number of persons and business entities that directly or indirectly depended on the mining sector. The situation had been exacerbated by lack of adequate safeguards to ensure that persons and business entities affected by the change were protected.

However, in the long run, the transformation will eventually revitalise the sector and yield economic and social gains. The recapitalisation of the mines coupled with the development of support infrastructure such as communication network, power and water systems will enhance production as well as investment in mining and non-related sectors. There will be employment generation to enhance income levels as well as associated training for new jobs to enhance performance, efficiency and productivity. Further, robust of large scale mining will generate foreign exchange and enhance government revenue. With increased revenue from the economic sectors, it will enable government equally invest in social sectors such as health and education.

### **Small Scale Mining**

The small-scale mining sub-sector is labour intensive by nature and as such it will generate employment for the people and thereby create income for the rural people. The consequence growth of this sub-sector will enhance the development of rural mining communities along side the adjacent villages. Like large-scale mining sub-sector, infrastructure development in the mining areas will play a vital role in terms of attraction of investment in other sectors such as agriculture and industry, commerce and trade. Apart from employment opportunities, the communities around the mining areas will benefit directly or indirectly from schools, health care services, road network, water systems and other social amenities.

### **Sector Programmes/Strategies and how they relate to Poverty reduction**

There are numerous programmes and strategies that could be implemented under the mining sector to make it viable and contribute positively to economic growth and

poverty reduction. Some few programmes and strategies have been identified in this first 3-year rolling Poverty reduction Strategy Paper. The programmes are suggested for both small-scale mining and large-scale mining. It is recognised that the requirements of the two sub-sectors differ and may need specific interventions.

Under small scale mining, the following programmes have been proposed: -

### ***Creation of a Revolving fund***

Small-scale mining operations often lack appropriate credit facilities and their operations are considered to be high risk by financial lending institutions. Most of the operators do not have substantial working capital to exploit the full potential of the sub-sector. Further, the small-scale mining operations are in remote place where the support infrastructures such as school health facilities road network and telecommunication facilities are inadequate or lacking. The situation may to some extent hinder both local and foreign investment in the sub sector.

This programme will also encourage small scale mining operators to form groups or associations that will enable them be credence to banks for credit purposes in order to reduce total dependence on the revolving fund. Once the revolving fund and operational procedures are in place it will enable especially the new operators to develop their mines with less difficulties. The programme will attract more new operators and other local and foreign investors thereby creating employment for the local communities The programme will also create market for agricultural products from the surrounding communities.

### ***Reintroduction of the gemstone exchange scheme***

The marketing methods of the gemstones, have been unsatisfactory. Middlemen have taken advantage of the marketing situation thereby obtain gemstone directly from the workers at the expense of the miner owners. Even in cases where the middlemen get the gemstone from the producers themselves, there is lack of skills in valuation of the products and this greatly disadvantages the producer who has no other immediate market for the product except the middlemen. This affects the returns as well as the capacity to reinvest. Therefore the reintroduction of the gemstone exchange will serve as a forum for the producers and the buyers of rough and processed gemstones and jewellery to conduct auctions and routine transactions. The gemstone exchange will also encourage the participation of traceable gemstone trading and marketing companies rather than individuals in order to promote transparency and accountability in the sub sector. This will revitalise the sector and make the communities around the mining operations viable.

### ***Introduction of Plant Hire Scheme***

Apart from finances, capital equipment plays an important role in exploitation of the mines. Most Small Scale mining operations apart from Kagem and Kariba Minerals, use basic tools such peeks hoes and shovels which are not effective. Because of the

nature of tools used, the production levels are low. The introduction of the Plant Hire Scheme will encourage efficiency and promote the development of new mines. The Scheme will target mainly the new operators as well as those that may not be able to access the facility under the diversification programme funded by the European Union. The Plant hire component under diversification programme mostly targets the viable and developed mining operations that may be able to pay for the equipment at economic rates.

In order to reinforce the scheme government through the ministry of mines will negotiate with Zambia National Service to use their newly acquired equipment at an affordable rate. Once the Scheme and the operation procedure are put in place, the small-scale mining operations will likely boost their production.

### ***Infrastructure Development***

Infrastructure development is key to the opening of both new small scale mining operations and large scale mining operation. Viable road network in the mining areas will attract investment in the small scale mining sub-sector. The development of the road network, will also easy accessibility of agricultural products to the markets.

### ***The Mining sector diversification programme***

This is an existing programme approved by government and funded by the European Union. It is currently jointly executed by, ministry of mines and minerals development through a commercial bank. The programme is intended to improve the utilisation of natural resources and non-traditional mining sector. The programme aims to achieve the following:

- ❑ Make available adequate geographical data to small-scale miners and prospectors.
- ❑ Enable small-scale miners and processors better able to manage their business
- ❑ Improve access to adequate capital and equipment for small-scale miners.
- ❑ Equip small-scale miners with adequate mining safety, valuation and processing skills.
- ❑ Enable small-scale miners and processors obtain fair market prices for the products.
- ❑ Ensure that effective and fair mining regulations and taxation policies are in place.
- ❑ Facilitate the improvement of the road access to the mining areas.

The programme is comprehensive and will compliment the programme/strategies mentioned above. It will ultimately enhance the exploitation of the small-scale mining potential.

Under large scale mining sub-sector, its worth noting that privatisation of major assets of the Zambia Consolidated Copper Mine has just been completed. The core preoccupation of the new mine owners is the re-capitalisation and rehabilitation of the mines. However, in the development agreements, the parties involved agreed that the new mine owners should contribute to poverty reduction by promoting local business development. In keeping with this commitment, some of the mine owners such as Konkola Copper Mine has proactively sought to initiate its local business

programmes. Under the local business programme a community development unit was established to among other things establish and update an inventory of local business especially from retrenches, and promote the use of local contractors. The programme has also adopted a Business Partners for Development a network of private corporations, government agencies, non- government organisations and international donors to manage social issues. The four thematic areas of the network's focus are: natural resources, water and sanitation, global partnership for youth development, and global road safety partnership.

The major programme under the large-scale sub-sector is the development of infrastructure at Lumwana copper project. The Lumwana Copper resource represents the largest undeveloped resource outside the Zambian Copperbelt, with significant potential to be increased with further exploration. Development of the mine at Lumwana would have a positive impact on economic growth and social benefits in terms improvements in infrastructure and employment opportunities in North-western Province. There is also good potential to develop commercial agriculture and related downstream processing. The main infrastructure required for the development of Lumwana copper project include:

**Power:** The power requirement of the proposed Lumwana mine design is estimated 27MW. It is envisaged that the plant will be supplied with electric power from the Zambian National Grid with a 330kv tie –in at Luano, 330kv overhead to solwezi and then 132kv overhead line from Solwezi to Lumwana with 2x 26mva outdoor transformers just outside the Lumwana plant.

**T5 Highway Upgrade:** The roads for supply and access from the copperbelt to Lumwana are the existing Zambian National Highways (T5) that will need upgrading.

**Railway Link:** The extension of the Zambia rail network from Chingola to Mwinilunga would be a most beneficial new infrastructure development for Northwestern province. This would allow the provincial agricultural potential to be better realised and would assist the potential mining project in the area.

**Town site:** A townsite occupying approximately 50ha is proposed to accommodate the total project workforce of about 1000 personal. A total of approximately 900 houses are planned along with a municipal office, recreation centre, medical clinic, fire service station, crèche and convenient stores.

**Water supply and sewage disposal:** A potable water supply and sewage treatment plant is proposed to service the designed Lumwana Township. The water supply will be part of the East Lumwana river diversion with the main dam having a 3 million cubic metre in volume and an area of 2000km squared. There will be a potable water treatment plant, a mega litres reservoir at the townsite and a sewage plant.

### *Priorities*

The development of support infrastructure at Lumwana is priority in large-scale mining. As for the small scale mining sub-sector, the following is the order of priorities:

1. The Mining Sector Diversification programme: This has been approved by government and funded by the European Union. Funds had been earmarked for the programme to start in December, 2000. Accordingly, it is the first in the order of priority for implementation.
2. The Plant hire scheme: It should be implemented as soon as possible because it will make mining easier and safer.
3. Gemstone Exchange scheme: It is envisaged that the scheme will bring order and fairness in the marketing of gemstone.
4. Creation of the revolving fund: This would require a lot of logistical preparations with regard to sourcing of seed money; administration and finding a bank that would run the fund.
5. Infrastructure development: infrastructure development requires money and time. Mining areas have to be accessed at all time and communication network and energy availability is central to the performance of the sub-sector.