



The United Republic of Tanzania

THE MINERAL POLICY OF TANZANIA

Ministry of Energy and Minerals

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Foreword

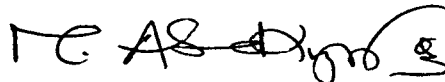
The Government of the United Republic of Tanzania has recognised the great potential that the mineral sector holds in contributing towards rapid national economic recovery and development. In order to realise this potential the Government has formulated this Mineral Sector Policy to guide and direct mineral development and exploitation.

In line with the changed macro-economic policy of the country, this policy stresses private sector initiatives and the need to attract modern technology and necessary investment capital for large scale mining.

It sets out strategies for rationalizing artisanal and small-scale mining into organised and efficient operations in order to ensure gainful employment and poverty alleviation. It also aims at initiating actions to mitigate the adverse environmental and social aspects of mining.

Under this policy, the role of the Government will be to stimulate and guide private mining investment by administering, regulating and facilitating the growth of the sector through a well organized and efficient institutional framework. However, the Government will not abdicate itself from the role of providing extension services to the artisanal and small scale miners.

It is my hope that this policy will provide a clear guidance towards sound exploitation of natural resources for the mutual benefit of the private investors, the Government and the entire people of Tanzania.



Dr. Abdallah O. Kigoda (MP)

MINISTER FOR ENERGY AND MINERALS

Mission and Vision

The Ministry of Energy and Minerals is charged with the responsibility of formulating a mineral policy, overseeing its administration, and co-ordinating the development of the mineral sector of Tanzania.

The vision for the next 25 to 30 years for the mineral sector is to have a strong, vibrant, well-organized private sector led, large and small-scale mining industry conducted in a safe and environmentally-sound manner; contributing in excess of 10% of the GDP; a well-developed gemstone cutting and jewellery industry making Tanzania the gemstone centre for Africa; and providing dependable employment to Tanzanians.

INTRODUCTION

The Government of Tanzania recognizes the need to put into place an internationally competitive investment environment for the mineral sector. The Government's vision and mission is to have a strong, efficient and profitable mining industry for the benefit of the Tanzanian people. It is envisaged that the mineral sector should contribute significantly towards industrial development, employment creation, social and economic infrastructural development (particularly for the rural areas); income generation, foreign exchange earnings and government revenue. All mineral sector activities shall be carried out on the basis of safe and environmentally-sound practices (for sustainability).

Geological investigations carried out over a period of more than sixty years, together with the available mineral production statistics and information, show that Tanzania has a rich and diverse mineral resources base with high economic potential. However, the country has yet to realize a befitting contribution from the vast mineral endowment.

Since independence, the Government has taken steps to develop the mineral sector. However, efforts undertaken within the framework of state-directed development strategies and policies have not succeeded in mobilizing the necessary investable resources. In general, the mineral sector development has been beset by a number of constraints, *inter alia*:

- (a) Late recognition of the sector's role in revamping the economy given the changing economic environment;
- (b) Lack or absence of appropriate and consistent macro-economic policies to provide an enabling environment for mineral development by the private sector investment;
- (c) Lack or absence of appropriate and consistent mineral sector policies oriented towards private sector participation;
- (d) Lack of adequate capital resources;
- (e) Limited use of appropriate and advanced technologies; and
- (f) Inadequacy of modern management and technical skills;

Over the past decade, the global mining industry has undergone dramatic changes which may have far-reaching implications for Tanzania. Many countries, particularly in the developing world, have embarked on wide ranging structural reforms aimed at opening up their economies to foreign trade and investment. This has resulted in a world-wide competition for investment. At the same time, the globalization of finance and investment and the deepening of financial mechanisms has opened up new frontiers, leading to an increase in the pool of risk capital available for exploration and mining development. Similarly, technological advances in various stages of mining development have greatly extended the resource base by enhancing the viability of low-grade deposits that were considered un-economical in the past and by enabling the discovery of deep seated and new deposits.

With these trend setting developments, and in order to take advantage of the opportunities offered by renewed interest in mining in Africa, the mineral sector of Tanzania needs to adjust and make a smooth transition towards a modern and viable mining industry. At the same time, artisanal and small scale mining activities in Tanzania have grown considerably in recent years. On the one hand, this sub-sector

of the mining industry is already a source of livelihood for well over half a million people, and has the potential for stemming rural-urban migration, stimulating local processing and manufacturing industries and alleviating poverty. On the other hand, artisanal and small scale mining activities are beset by technical, financial, marketing, social and environmental problems. Thus to maximize socio-economic benefits to the country, there is need to make these activities orderly, safe, productive and environmentally sound.

The profound economic reforms and restructuring undertaken in Tanzania during the second half of the 1980s and the 1990s have marked a clear shift in favour of private sector development and market-oriented economic management. In this context, the Government has embarked on establishing constructive partnerships to promote private sector initiatives and accelerate economic growth. Consistent with the reforms, the role of the Government has shifted from that of owning and operating mines to that of providing clear policy guidelines, stimulating private investment in mining and providing support for investors.

Within the changed socio-economic environment, the functions of the Government in the mineral sector will focus on:

- (a) Developing an enabling legal, regulatory, fiscal and institutional environment for private sector investment in mining;
- (b) Strengthening the ability of the State to effectively carry out its regulatory, promotional (investment and marketing) functions;
- (c) Establishing environmental, health and safety guidelines and ensuring compliance;
- (d) Carrying out basic geological mapping, maintaining up-to-date mineral resource database, and promoting the development of the country's mineral potential;

- (e) Reinforcing the provision of extension services and assistance to artisanal and small-scale miners in adopting safe and environmentally-sound mining and processing practices; and
- (f) Facilitating development of adequate industrial infrastructure for mining development.

The private sector will play the role of being the principal vehicle for carrying out direct investment in mining.

TANZANIA'S MINERAL ENDOWMENT AND POTENTIAL

Mineralization in Tanzania falls into the following major geological groupings:

- Gold occurrences in the *Archaean greenstone belts* and banded iron formations in the Southern and Eastern parts of Lake Victoria;
- Gold and base metals occurrences in the *Proterozoic Ubendian* systems in Western Tanzania;
- *Kimberlite* pipes in the Central and Southern parts of the *Archaean* craton of Tanzania;
- Nickel, cobalt, copper, tin and tungsten-bearing rock formations in the *Karagwe - Ankolean system* of Northwest Tanzania;
- Major gemstone occurrences in the *Proterozoic Usagaran and Ubendian geological systems*;
- Carbonatites associated with the Rift Valley system;
- Iron ore hosted by anorthositic intrusives in the *Proterozoic Ubendian* system;

- Coal resources found in the *Karoo* system;
- Evaporites deposited in the Rift Valley and younger rock formations along the coastal belt; and
- A variety of industrial minerals such as kaolin, mica, phosphate, magnesite, beach sands and diatomites embedded in different rock formations.

Tanzania is widely recognized in the mining industry for its highly prospective geology. It has a number of prospective geological environments from which commercial mineral deposits have yet to be established. Its under-explored geological formations, with a high potential for economic mineralization, extend over 800,000 square kilometers. One of the prospective geological structures is the Tanzanian Craton. This structure occupies over one third of the country and contains the classical “*greenstone belts*” which are universally known to be prolific in gold and base metal mineralization, especially in Canada, Australia and West Africa. There are also widespread *Proterozoic formations* similar to the geological environments hosting gold deposits in South America and West Africa.

Identified gold mineralization is concentrated in three main areas: Lake Victoria greenstone belts; Mpanda mineral-fields and Lupa goldfield. The diamond potential is represented by a world-class diamondiferous kimberlite which has been mined for over 50 years and more than 300 kimberlite pipes (of which about 20% are estimated to be diamond bearing) which extend from Mwanza through Shinyanga to Tabora and Singida. Coloured gemstones occur in *Proterozoic formations*, principally in the *Usagarian and Ubendian system*. These also host graphite deposits such as the world-class graphite mineralization at Merelani. Additionally, potential for nickel and cobalt includes an extensive belt of the Kibaran Fold System extending into Uganda and Burundi.

Base metals occur in *Proterozoic formations* and can be potentially present in “*greenstone belts*.” Also, at least 20 carbonatites have

been identified near branches of the East African Rift Valley system of which only a few have been thoroughly investigated. Furthermore, tin mineralization is well-established particularly in the Karagwe area in the North-Western part of the country. In addition to the vast mineral endowment, Tanzania offers to potential investors the following competitive advantages:

- A considerable exploration area with a sizeable inventory of unclaimed mineral ground;
- An easily accessible and systematically archived geological and mineral resources database;
- A business-friendly environment marked by sustained political stability and social harmony, with unlimited scope for private sector involvement in economic activities;
- A simplified investment approval procedure with a favourable regulatory framework and a competitive package of fiscal incentives for mining investments;
- Opportunities for acquisition and/or rehabilitation of state-owned mining enterprises.

THE MINERAL POLICY OF TANZANIA

3.1. Challenges

The mineral sector policy is designed to address the following national challenges:

- (a) To raise significantly the contribution of the mineral sector in the national economy and increase the Gross Domestic Product (GDP);
- (b) To increase the country's foreign exchange earnings;
- (c) To increase government revenues;
- (d) To create gainful and secure employment in the mineral sector and provide alternative source of income particularly for the rural population; and
- (e) To ensure environmental protection and management.

3.2. Objectives

In view of these challenges, the Government's policy for the mineral sector development will aim to attract and enable 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. Accordingly, the policy objectives of the Government for the mineral sector are:

- (i) To stimulate exploration and mining development;
- (ii) To regularize and improve artisanal mining;
- (iii) To ensure that mining wealth supports sustainable economic and social development;
- (iv) To minimize or eliminate the adverse social and environmental impacts of mining development;
- (v) To promote and facilitate mineral and mineral-based products marketing arrangements;
- (vi) To promote and develop Tanzania as the gemstone centre of Africa; and
- (vii) To alleviate poverty especially for artisanal and small-scale miners.

3.3. Mineral Policy Directions and Strategies

In order to achieve the sector policy objectives, the following policy strategies have been set:

3.3.1. The Macro-economic Environment

A sound and stable macro-economic environment is an important prerequisite for private sector development and investment in mining. Key elements for such policy include: appropriate market-based exchange rates and monetary policies, trade and fiscal policies. In effect, a sustainable development of the mineral sector requires a stable, transparent and predictable macro-economic environment. The Government is committed to pursuing these policies consistently for sustainable sectoral and overall development.

3.3.2. The Fiscal Regime

The Government will formulate and implement a mining taxation regime which is conducive to investment in exploration and mining development. The tax package should recognize the investor's need

to recover exploration and development outlays, to achieve a rate of return commensurate with risk, to repatriate dividends and to meet financial obligations with creditors and suppliers. In formulating the fiscal regime, the Government will aim to balance the country's interest with those of investors by ensuring that the mining taxation regime is equitable, stable and predictable, non distortionary and internationally competitive.

In addition to being stable and predictable, the fiscal policy regime will be designed to be promotionally competitive for attracting and retaining investments in the mineral sector. Furthermore, it will aim to increase government spending in the supportive services and physical infrastructure required for development of the mining sector. Hence, the fiscal policy forms an important instrument for providing incentives to investors.

◆ *Strategies for the Fiscal Regime*

Strategies for creating an attractive fiscal regime include the following:

- (i) Reviewing and revising the fiscal regime with the aim of creating a more effective taxation system with streamlined procedures and modalities to ensure an efficient, fair, stable and competitive tax regime for mining and mineral trading;
- (ii) Establishing procedures and methods that ensure that taxes owing to the Government from the mineral sector are properly assessed and collected to promote compliance;
- (iii) According favourable consideration to exploration and development expenditures with a view to minimizing front-end costs and therefore enhancing investment in mineral exploration and development;
- (iv) Ensuring easy availability of pertinent information on the fiscal policy and the tax regime for mining activities;
- (v) Deploying fiscal incentives to encourage domestic mineral beneficiation and establishment of local marketing infrastructure for mineral trading;

- (vi) Encouraging and supporting investment in the development of social and economic infrastructure in the mining localities by providing favourable tax incentives;
- (vii) Harmonizing Tanzania's fiscal regime with those of competing countries as a tool to mitigate mineral smuggling and encourage trading through official channels.; and
- (viii) Providing incentives which encourage re-investment of profits earned from mining operations.

3.3.3. The Legal and Regulatory Framework

The policy of the Government is to establish an internationally competitive legal and regulatory framework to attract and sustain foreign and local investment in the mineral sector, and to create a stable and conducive business climate.

The legal framework should also aim to deter information hoarding on new discoveries, freezing of exploration acreage for speculative purposes, transfer pricing and tax evasion. These will be reflected in the Mining Act of Tanzania.

◆ Strategies for the Legal and Regulatory Framework

The strategies for the legal and regulatory framework include the following:

- (i) Harmonizing and consolidating all statutes under which the mineral sector operates into one Mining Act which sets out clear, simple and transparent procedures for allocation of rights, the transition from exploration to mining rights, and the transfer of these rights;
- (ii) Streamlining the licensing procedures to harmonize small-scale and large-scale mining operations; ensuring transparency and fairness by conferring ownership of mineral rights on the basis of first come, first served basis;
- (iii) Rationalizing the licensing system to ensure exclusivity of licensed areas;

- (iv) Establishing a system of title maintenance which encourages active mineral exploration and exploitation and discourages hoarding for speculative and other purposes;
- (v) Grouping minerals into categories for the purpose of facilitating targeting of incentives, penalties, specialized skills development and mineral administration;
- (vi) Harmonizing the mining laws with other statutes being administered by other institutions that directly or indirectly affect the development of the mineral sector;
- (vii) Ensuring environmental protection and land reclamation; and
- (viii) Ensuring that contractual rights and obligations are protected and providing for settlement of disputes through the Courts or by international arbitration.

3.3.4. The Institutional Framework

To ensure that the mineral sector is properly serviced, the Government is committed to:

- (a) Establishing a well organized and efficient institutional framework;
- (b) Ensuring the availability of adequate and competent professional and technical staff; and
- (c) Allocating sufficient resources to effectively and efficiently carry out duties and responsibilities which include the administration, supervision, monitoring, training, provision of extension services and promotion of sectoral activities.

◆ Strategies for the Institutional Framework

The strategies of the institutional framework include:

- (i) Restructuring, streamlining and strengthening the administrative and organizational framework necessary to properly and effectively administer, promote, and service the mineral sector;

- (ii) Bringing administrative and technical support services closer to the mining centres by strengthening zonal and district administrative offices and by decentralizing the monitoring function of the mineral sector;
- (iii) Strengthening communication and the flow of information between Ministry Headquarters and zonal and district mines offices;
- (iv) Establishing a formal consultative mechanism between the government and the mining sector for the effective development, regulation and monitoring of the sector;
- (v) Establishing a co-ordinated consultative mechanism within the government especially with the central ministries responsible for planning, health, finance, lands, water, works, environment, law and order; and regional authorities for the effective development of the sector;
- (vi) Facilitating and promoting the development of adequate and competent professional and technical staff for the mineral sector;
- (vii) Motivating the public sector personnel in the mining industry by improving their working conditions, operational facilities and remunerations;
- (viii) Improving the system of information flow for the mineral sector to sensitize and create awareness, especially for artisanal and small-scale miners and rural population, on the opportunities present, and the regulations governing the sector;
- (ix) Strengthening the existing training institutions and establishing vocational training centres for the sector;
- (x) Developing the capacity of Geological Survey for generation and storage of geological information.

3.3.5. Financial Services

Although financial sector reforms undertaken since the mid-1980s

have attracted new banks to Tanzania, the financial services available are not tailored to the requirements of the mineral sector. Large and medium scale mining require big capital outlays which call for the promotion and development of large and sophisticated financial intermediaries. Artisanal and small scale mining require relatively small capital outlays but formal financial mechanisms have been slow to respond to the financial needs of this sub-sector. Most small-scale miners are not in a position to meet the loan conditions of the formal financial institutions. At the same time, local financial institutions do not fully realize the economic potential of the sub-sector and are therefore reluctant to formulate financial schemes to support its development.

Improvement of financial services to the mineral sector should therefore aim to create incentives and regulations which encourage and facilitate easy transfer of mineral properties and provide security to creditors. Efforts should also be directed at maximizing utilization of resources available within the sector.

To this end and with regard to small scale mining, the government will use a two prong approach, emphasizing the improvement of small scale miners' access to credit on the one hand and the mainstreaming of small scale mining loans by the formal financial institutions on the other.

◆ *Strategies for Improving Small-Scale Miners' Access to Credit*

- (i) Supporting the formation of formal enterprise groups;
- (ii) Formalizing traditional funding systems by promoting the following options: hire-cum-purchase system, forward sales, mutual group savings schemes;
- (iii) Encouraging banks to develop mine finance expertise and to establish mobile banking system as well as commercial banks in the mining areas;
- (iv) Encouraging financial institutions to support small-scale mining by formulating affordable credit schemes for the sub-sector and adjusting start-up capital requirements.

- (v) Promoting the use of third party guarantees to enable other institutions to assist miners to get loans;
- (vi) Facilitating the creation of mineral property markets to enable discoverers to sell their properties to developers at competitive prices;
- (vii) Working, in conjunction with NGO's, towards the establishment of miners' cooperative banks, and informal financial institutions such as rotating savings and credit associations. Advocating efforts to increase miners' incomes through value added activities;
- (viii) Putting in place a mining trust fund to finance simple mining equipment and other inputs and devising an effective mechanism for the replenishment of the fund; and
- (ix) Conducting awareness programmes to promote a savings culture among small-scale miners;

3.3.6. Rationalizing Artisanal and Small-Scale Mining

The Government of Tanzania recognizes the positive contribution of the artisanal and small scale mining sub-sector to the economy which include the discovery of mineral occurrences, mineral production and the creation of employment and incomes in the rural communities. In view of this, the Government is committed to supporting the small-scale mining sub-sector by facilitating the transformation of the present artisanal mining activities into more organized and modernized small-scale mining units, and by promoting modalities of mineral marketing which encourage transparent business transactions and discourage smuggling.

◆ Strategies for Rationalizing Artisanal and Small-Scale Mining

- (i) Transforming and upgrading artisanal mining into organized and modernized mining;
- (ii) Facilitating the availability of appropriate and affordable mining tools, equipment and consumables and encouraging the manufacture and supply of the same;

- (iii) Promoting partnership between local small-scale miners and large-scale investors to facilitate technology transfer and optimize mineral resources exploitation;
- (iv) Providing supportive extension services in mining, mineral processing and marketing;
- (v) Streamlining and simplifying the licensing of artisanal miners and mineral dealers;
- (vi) Preparing, disseminating and enforcing a code of conduct in mining and mineral processing; and
- (vii) Promoting marketing arrangements which are responsive to the requirements of the artisanal and small-scale mining sub-sector.

3.3.7. Mining Sector Support Services and Facilities

In the mineral sector, as in other sectors, the presence of support services and facilities is important for technology transfer, productivity enhancement and for the sector's growth and development. The government is therefore committed to promoting and facilitating the establishment in the country of the mineral sector support services and facilities.

◆ *Strategies for Support Services and Facilities*

- (i) Encouraging and facilitating the establishment of industries that provide direct services to the mineral sector;
- (ii) Encouraging maximum utilization of the available mineral laboratories and mineral beneficiation facilities while at same time encouraging and facilitating the establishment of new ones;
- (iii) Facilitating the availability of simple, modern and environmentally sensitive technologies in the form of tools, equipment, machinery and materials;
- (iv) Encouraging the establishment and development of mining contractors and other mineral sector service providers;

- (v) Promoting the establishment and development of professional, industrial and grassroots associations related to the development of mining activities;

3.3.8. Creating and Maintaining a Viable Infrastructure

Well developed and reliable economic and social infrastructural facilities, such as transport; water supply; power supply; communications; education and health services; and recreation are vital for the mineral sector's development.

◆ Strategies for Creating and Maintaining a Viable Infrastructure

- (i) Coordinating efforts between the sectors involved in planning and development of infrastructural facilities so that the needs of the mining industry are taken into account;
- (ii) Encouraging and supporting the development of reliable economic and social infrastructural facilities relevant for the development of mineral resources particularly in the rural areas;
- (iii) Promoting investment in the rehabilitation of existing energy system and in the expansion of the power generation and distribution capacity with a view to ensuring the supply of reliable, cost-effective power for mining operations;
- (iv) Encouraging mining companies to invest in power, water supply and social infrastructure such as schools, hospitals, and recreational facilities within the mines and adjoining localities;
- (v) Ensuring coordination between central and local governments, and small scale miners in planning and developing the required infrastructural facilities in small scale mining areas; and
- (vi) Supporting community initiatives to develop infrastructural facilities in mining areas and empowering NGOs and mining associations to mobilize miners to undertake such activities.

3.3.9. Establishing Formal Marketing Systems

The social and economic benefits associated with reliable, stable and efficient mineral markets are well recognized. Good market

arrangements can ensure the growth of both local and export markets, and increase foreign exchange earnings and revenue. Mineral marketing development entails the following:-

- (a) Liberalizing mineral marketing arrangements;
- (b) Establishing formal marketing systems;
- (c) Developing locality mineral markets; and
- (d) Developing mineral export markets.

◆ *Strategies for Establishing Formal Marketing System*

- (i) Simplifying licensing procedures for mineral dealers and traders to encourage formalization;
- (ii) Rationalizing and streamlining taxes, tariffs, fees and other imposts on minerals;
- (iii) Improving the monitoring of mineral sales and simplifying sales record requirements;
- (iii) Providing mineral marketing extension services, particularly in mineral grading and valuation, and offering short-term training programmes on mineral marketing; and
- (iv) Instituting stiff penalties to smugglers of minerals, including confiscation by the Government.

◆ *Strategies for the Development of Local Markets*

- (i) Facilitating the establishment of competitive mineral markets close and within the mining areas, to be operated by mining associations, licensed individuals, mineral dealers, companies, and financial institutions; and
- (ii) Facilitating the establishment of a system of locality marketing committees and charging them with the task of ensuring the smooth operation and growth of mineral markets, keeping production statistics, fixing open market schedules and advertisement to attract participants;

◆ *Strategies for the Development of Export Markets*

- (i) Facilitating access to up-to-date information on mineral markets;
- (ii) Encouraging export promotion activities (e.g. attending exhibitions such as those organized by TAMIDA and advertising in the media) through incentives;
- (iii) Promoting the establishment of formal financing schemes for the mineral trade;
- (iv) Utilizing Tanzania's foreign missions in identifying new markets, linking dealers with foreign buyers, and initiating targeted promotional programmes to boost the market share of Tanzanian minerals.
- (v) Promoting direct sales of minerals to foreign buyers.

3.3.10. Integrating Mining into the National Economy

Mining is a viable option for industrialization and economic development of Tanzania provided the right strategies are pursued for the sector. Hitherto, mining operations have been weak in creating linkages with the rest of the economy because minerals have been extracted and exported largely in raw form.

In order to maximize the developmental impact of mining, the Government will aim to foster economic inter-dependencies between mining and other sectors and ensure that the benefits of mining development accrue to the rest of the economy especially through value added maximization.

◆ *Strategies for Integrating Mining into the Economy*

- (i) Developing the country's ability to provide essential inputs to the mining sector;
- (ii) Offering incentive schemes to promote mineral beneficiation investments;

- (iii) Promoting forward linkages through development of value adding activities.
- (iv) Encouraging the acquisition of modern cost-effective technologies to produce high quality mineral products for world markets;
- (v) Directing special efforts in promoting development and exploitation of industrial minerals which are abundantly available throughout Tanzania.

3.3.11. Human Resources Development

The development and appropriate utilization of human resources is critical to the sustainable development of the mineral sector. The Government of Tanzania is committed to promoting the development of the requisite human resources by ensuring that there is adequate and multi-disciplinary training, as well as the effective utilization of skills and technological advances in the mineral sector.

◆ *Strategies for Human Resource Development*

Strategies for human resources development aim to reflect the need to train and continuously upgrade personnel to meet the challenges of the sector and attain and maintain competitiveness. Therefore, the strategies include the following:

- (i) Encouraging and facilitating training in disciplines necessary for the mineral sector's development such as geology, mining engineering, mineral processing, gemmology, geophysics, environmental science, geochemistry, mineral economics, legal skills, administration, computer science and other field;
- (ii) Encouraging the establishment of training institutions in various disciplines relevant to the sector at all levels of skills;
- (iii) Encouraging and motivating foreign investors in mining to train Tanzanians in different skills;
- (iv) Promoting optimal allocation and placement of professional and technical staff in the public sector in support of the mining sector;

- (v) Encouraging the establishment of centres of technical excellency in various fields for capacity building, and setting up mechanisms for exchange of knowledge and experience;
- (vi) Strengthening the ability of institutions such as the Mineral Resources Department's laboratory in Dodoma, the Madini Institute and the National Vocational Training Centers to carry out multi-disciplinary research and training activities, and promote mineral-oriented research activities; and
- (vii) Supporting the involvement of mining industry organizations such as Regional Mining Associations in the training activities in the industry.

3.3.12. The Environmental and Social Sustainability of Mining Development

To ensure the sustainability of mining, there is a need to integrate 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 the past, environmental management and the enforcement of health and safety regulations in mining have been hindered by lack of coordination, insufficient operational funds, and inadequate expertise. As a result, there has been an increase in the uncontrolled extraction of minerals and the use of unsafe mining methods.

This has led to severe environmental damage and to appalling living conditions in mining communities. Mining camps are often plagued by poor sanitation, lack of clear and safe drinking water, high congestion, and poor hygiene. To address these problems, the Government's policy is to initiate actions to: (a) reduce or eliminate the adverse environmental effect of mining; (b) improve health and safety conditions in mining areas; and (c) address social issues affecting women, children and the local community.

3.3.12.1. Environmental Protection

Environmental problems can arise from large as well as medium and small-scale mining operations. In general, mining activities can cause

land degradation, air pollution and water contamination. Open pit mines alter the natural habitat and require dust, drainage and storm water control. Underground operations cause less land disruption but are prone to surface subsidence. Mineral beneficiation operations are potentially more damaging to the environment because of chemical contamination of waterways and air pollution. Although the entire mining industry must adhere to the same environmental standards, the requirements for meeting established standards vary according to the scale of operations. The objective of the Government is to foster the use of best practices in environmental management systems in mining development.

◆ *Strategies for Protecting the Environment*

- (i) Drawing up comprehensive environmental management programmes for the mining industry;
- (ii) Establishing effective environmental regulations and putting in place procedures for monitoring compliance;
- (iii) Setting up and strengthening the institutional capacity- especially the field offices (zonal and district mines offices) - for monitoring and enforcing environmental regulations;
- (iv) Requiring new projects to carry out baseline environmental studies and prepare environmental impact assessment and environmental action plans;
- (v) Instigating environmental audits to evaluate the performance of existing mines and identify areas for improvement;
- (vi) Specifying procedures for determining environmental liability;
- (vii) Providing rules for setting up reclamation funds to reinstate land to alternative uses after mining;
- (viii) Setting appropriate guidelines for allowing the conduct of mining in restricted areas such as forests, national parks, sources of water and other designated areas;
- (ix) Abating the use of toxic chemicals and pollutants by promoting of mining in restricted areas such as forests, national parks, sources of water and other designated areas.

3.3.12.2. *Environmental Management for Small Scale Mining*

The environmental problems associated with small-scale and artisanal mining tend to be severe and geographically dispersed, and call for special attention. Deforestation, particularly the felling of mangroves for salt preparation is a common problem. Patterns of land use are also affected by the loss of arable and pastoral land, soil erosion and acidification. The effect on water consists of river blockages, siltation and pollution by toxic chemicals (e.g. cyanide and mercury). Air pollution results from dust and gas emissions into the atmosphere.

Special effort is needed to raise environmental awareness and to promote environmentally-friendly behaviour among artisanal and small-scale miners. Such an effort will require a combination of persuasion and penalty approaches.

◆ *Strategies for Environmental Management for Small Scale Mining*

To prevent, reduce, control or eliminate the adverse effect of small-scale mining on the environment, the Government aims to apply the following strategies:

- (i) Demonstrating and encouraging the application of environmentally-sound technologies as well as mining methods;
- (ii) Preparing and distributing information booklets and handbooks in Kiswahili on acceptable mining practices and spelling out the environmental obligations for mineral title holders and the legal consequences of non-compliance;
- (iii) Improving environmental awareness through the media;
- (iv) Building partnerships with non governmental organizations (NGOs), private companies and individuals to ensure better environmental awareness and management;
- (v) Establishing stricter environmental standards in densely mined area;
- (vi) Empowering mining extension officers or designated agents to conduct regular monitoring;

- (vii) Specifying environmental control measures such as pollution taxes, fines and other penalties based on the "polluter pays" principle; and
- (viii) Establishing proper authority structures, especially miners security units in mining camps to uphold law and order and facilitate enforcement of health and safety regulations.

3.3.12.3. Ensuring Human Health and Safety in Mining

Environmental problems in mining are compounded by health and safety hazards. The mining industry is among the riskiest industries in terms of the incidence of accidents. However, increased automation and the use of warning devices as well as constant employee drills have dramatically improved safety performance in large scale operations over the last decade. The same is not true for the artisanal and small-scale mining sub-sector which continues to be plagued by avoidable accidents often arising from unsafe mining and processing practices and lax safety procedures. The Government's policy is to ensure the protection of human health and safety in mining development.

◆ Strategies for Ensuring Human Health and Safety in Mining

- (i) Drawing up and establishing health and safety regulations, and formulating preventive measures for accidents and other human health and safety hazards;
- (ii) Strengthening and enforcing health and safety regulations in all stages of mineral development;
- (iii) Improving health and safety education and encouraging investment in health care facilities, e.g. dispensaries, clinics, HIV/AIDS screening laboratories in mining areas;
- (iv) Encouraging mining communities to take initiatives for the private provision of essential social infrastructure and services;
- (v) Incorporating the provision of social infrastructure and hygiene enhancing facilities such as water supply and sewage systems in the community development plans of highly concentrated mining areas;

- (vi) Empowering government health and safety inspectors to carry out regular and random inspections on mining sites;
- (vii) Seeking NGOs, miners' associations and local government's involvement in enforcing health and safety standards.

3.3.12.4. Addressing Women and Children Issues in Mining

Mining development gives rise to a host of social problems affecting women, children and the communities. Women face economic and socio-cultural barriers which restrict their effective involvement in mining. Children, whether helping parents or working on their own, get a premature introduction to the harsh conditions of mining and lose an opportunity to getting an education and improving their prospects in life. Women tend to bear a disproportionate share of the negative effects of mining but are prone to receive little of its benefits. These issues must be addressed to ensure that mining benefits are equitably distributed and women and children are shielded from the negative effects of mining as much as possible.

◆ *Strategies for Addressing Women and Children Issues in Mining*

- (i) Encouraging and facilitating employment and involvement of women in mining development activities such as mining, processing and mineral trade, and in the provision of economic services in mining communities;
- (ii) Alleviating any technical, financial, and cultural barriers to the involvement of women as potential investors and owners of claims;
- (iii) Conducting awareness programs to promote acceptability of women participation in mining;
- (iv) Enforcing regulations against child labor and imposing stiff penalties where violated;
- (v) Addressing the underlying poverty problem in mining areas and providing viable alternatives;

- (vi) Targeting children in mining areas for special effort in their education; and
- (vii) Supporting and promoting productivity-enhancement programmes which can eliminate child labour.

3.3.12.5. Strengthening Community Participation and Involvement in Mining

Mining investment projects are often negotiated between the central Government and the mining companies. The Government's objective is to ensure that there is greater involvement and participation of local communities in the implementation of mining projects. Experience in some mining countries show that greater community participation and involvement in mining projects contributes significantly to their (projects) sustainability.

◆ Strategies for Strengthening Community Participation and Involvement in Mining

- (i) Sensitizing the local communities on the advantages of utilizing advanced technology, and large scale investment in mineral production;
- (ii) Requiring companies involved in large projects to undertake social impact analyses on the communities and project areas and explicitly incorporate results in the project viability and draw up programmes for addressing negative impacts;
- (iii) Establishing a framework for timely promotion of good relations with the population of mining localities;
- (iv) Encouraging mining companies to contribute to local economic development by using local inputs whenever this is economically feasible;
- (v) Facilitating the establishment of strategic partnerships between mining companies and the local community; and
- (vi) Fostering arrangements which promote collaboration between large scale mining companies and small-scale miners for mutual benefit.

THE ROLE OF THE GOVERNMENT

The Government's role in the mineral sector is to provide clear policy guidelines, stimulate and promote the sector's various players, and see to the sector's general development. Rather than directly engaging in productive activities, the Government will concentrate its efforts on being the sector's regulator, promoter, facilitator and service-provider. On occasioned basis the Government may elect to require limited participation in certain projects for strategic or promotional purposes. The functions of the Government will focus on the following:

4.1. Government as Regulator

- (i) Pursuing sound economic and fiscal policies that are conducive to private sector investment in mining;
- (ii) Administering the mining laws and attendant regulations;
- (iii) Issuing and administering all types of minerals rights and mineral trading licences;
- (iv) Establishing environmental, health and safety guidelines and ensuring compliance; and
- (v) Collecting taxes, duties, royalties, fees and rental payments arising from mining development

4.2. Government as Promoter and Facilitator

- (i) Coordinating and establishing consultation mechanisms within the government, the private sector and other agencies for smooth development of the mineral sector;
- (ii) Carrying out basic geological mapping of the country and maintaining up-to-date information on mineral resource potential for promotional and development purposes;
- (iii) Promoting the development of Tanzania's mineral potential by preparing and disseminating promotional materials;
- (iv) Providing guidance to investors and facilitating contact and communication with relevant institutions;
- (v) Facilitating and promoting linkages among universities, government, research institutions and industry for the productive utilization of their inter-dependencies for mineral sector development.

4.3. Government as a Service Provider

Service provision is a role that should be played by the private sector except with regard to the provision of not-for-profit extension services to artisanal and small-scale miners. As a service institution, the functions of the Government are:

- (i) Providing or encouraging others to provide technical advice and services relating to the mineral sector to the general public, and Government departments and parastatals;
- (ii) Establishing, supporting and coordinating technical assistance programmes to the artisanal and small-scale mining sub-sector;
- (iii) Strengthening the capacity of the Mineral Resources Department to offer extension services to small scale miners;
and
- (iv) Ensuring adequate operational budget for the successful implementation of extension programmes.

**COMMUNICATION STRATEGY FOR THE
MINERAL POLICY**

5.1 Marketing Tanzania's Mineral Potential

The Government in partnership with the private sector will make concerted efforts to market Tanzania's mineral potential through different methods including the following:

- (i) Gathering, processing and publishing geological information maps and reports for public use;
- (ii) Maintaining an up-to-date geological data base;
- (iii) Preparing brochures and other publications on the mineral sector of Tanzania;
- (iv) Disseminating through internet and the mass media information on the country's mineral potential, the mineral sector's legal, regulatory and fiscal regimes; and other useful information for investors;
- (v) Publishing articles in magazines on developments in the mineral sector of Tanzania;
- (vi) Participating in international mineral conferences, symposia, workshops, seminars, gem shows; and in promotional tours;

- (vii) Organizing mineral investment fora for Tanzania;
- (viii) Organizing gem shows especially for special gemstones; and
- (ix) Pooling efforts and enhancing Tanzania's mineral reputation by cooperating with other mineral producers and dealers.

5.2. Identifying the Target Groups

In order to enhance the effectiveness of the implementation of the mineral policy, different interest groups have been identified for targeting attention. These include the following:

- (i) Large and medium-scale foreign and local investors;
- (ii) Small-scale local investors;
- (iii) Mineral traders and dealers;
- (iv) Mineral beneficiaries;
- (v) The financial services sector and the capital markets;
- (vi) Mineral sector support services;
- (vii) National and local leaderships and politicians;
- (viii) Communities in mining localities, with special attention to women and children; and
- (ix) Non-governmental organizations (NGOs) and other entities of relevance to the mining sector.

CONCLUSION

Tanzania's promising mineral potential can be harnessed to make a significant contribution to the national economy and make the benefits reach a wide spectrum of the population. The long-term development perspective is to increase the mineral sector's contribution to the economy from its present level of less than two percent to about ten percent of the GDP by the year 2025.

In order to achieve this objective for the mineral sector, the general sectoral development strategy gives strong emphasis to private mining development. The role of the Government focuses on regulating, promoting and facilitating private investment. The Government also acts as a service provider in the case of extension services for artisanal and small-scale mining.

The Government is also keen on stimulating the transformation process of artisanal and small scale mining, integrating mining into the national economy and addressing mining-related social and environmental problems. To achieve these objectives, the Government relies on the ability of the private sector to take advantage of opportunities and to respond to incentives.

The legal and regulatory framework provides clear, transparent, and simple procedures for the granting, sale and transfer of mining rights. It also specifies the obligations of the investor and guarantees certain rights. The fiscal regime is articulated to be stable, non distortionary and internationally competitive.

The Government also recognises the need to have an effective institutional framework. This entails putting in place modern, service-oriented institutional structure, ensuring the availability of competent professional and technical staff, and allocating sufficient resources to effectively and efficiently carry out the regulatory and promotional functions. As mineral markets play a vital role in the development and contribution of the mineral sector to the national economy, the Government aims to liberalize marketing arrangements to encourage the use of official channels for mineral exports and to support the long-term growth of the small-scale mining sub-sector.

The implementation of the mineral sector development strategy requires partnerships with stakeholders, particularly the Government, the private sector, the civil society and international organizations. An agenda for action has been part of the selected strategy. The options for strategy as outlined in this policy document can be translated into specific lines of actions and programmes of activities.