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**DRAFT POLICY DIALOGUE PAPER
ENTITLED
CONFLICTS ENDEMIC IN EXTRACTIVE INDUSTRIES
(Case of Gold Mining Governance in Tanzania)**

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ABSTRACT

The economies of many countries, such as the Gulf and Southern African States, are sustained by financial flows from the extraction of mineral resources and fossil fuels. The discovery of such fortunes, in sufficient quantities that can viably be exploited is, at face value, a significant national blessing. Expectations are often high when a major foreign currency earning activity that bolsters national budgets comes on stream. With such finances it becomes possible to address various development issues. Such flows could make it easier to attain set goals in the Development Vision 2025 and the National Strategy for Growth and Reduction of Poverty in Tanzania. The dream for the Tanzanian economy is not far different from those of other countries such as Botswana, South Africa, Angola where development has been speeded up by cash flows from the marketing of mineral and oil products.

However, experience has shown that finances obtainable from mineral and fossil fuel extraction – the Extractive Industry, have not assisted economic and social development in all developing countries owning such resources. On the contrary, such flows have adversely affected political and hence socio-economic stability, in some countries thus drawing them into bloodshed and under-development. This paper examines the situation with gold mining in Tanzania – the third largest gold producing country on the African continent. It notes that gold mining, though a century old, has had its ups and downs due to governance related issues. The paper therefore starts by introducing a general view of governance in terms of mineral extraction and concludes with the same for the gold mining industry in Tanzania. It asserts that policies and mind sets of the post-independence era severely limited and constrained investment in mineral exploration and extraction, resulting in the closure of existing mines without new openings for over 20 years. The paper also highlights the reality that a paradigm shift, in favour of economic recovery and investment promotion, opened doors and made it possible for the artisanal and small miners to rejuvenate the mining of gold and tanzanites in the 1980s. Further liberalization, in the context of globalization, made it possible for large scale miners to join ASM by opening up new large mines every year since 1998.

The ugly side of mining that has been experienced on the global scale and on the continent has also come to Tanzania's experience. Significant disputes and conflicts have surfaced among industry stakeholders consisting of ASM, LSM, host communities and their community based organizations, and both local and central governments. This paper has reviewed this situation and has argued that the conflicts experienced in the mining industry in Tanzania are endemic and hence a part and parcel of the industry. They cannot be wholly removed without hurting production. They may be mitigated to the level of stakeholder co-existence but could also flare up almost as easily as they sprung up. The paper further shows that it may not be easy to mitigate between stakeholders in a multi-spectral array of interest that exists in the industry. Should this be attempted, then the entry point is to align the various policies and laws and create a framework that considers all sectors linked to mineral exploration and extraction. The bottom line is that all stakeholders will be losers if gold production ceases. In the same vein, all are jointly winners if production is made profitable in their common interest in which the Government, professing and employing principles of good governance, will maintain a leading role.

Acronyms and Abbreviations:

ASM	Artisanal Small Miners
BIF	Banded Iron Formation
BoT	Bank of Tanzania
CBO	Community Based Organisation
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
DRC	Democratic Republic of Congo
EEF	Economic Empowerment Fund
EEZ	Exclusive Economic Zone
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
ICMM	International Council on Mining and Metals
LSM	Large Scale Miners
MCIMS	Mining Cadastre Information Management System
MTR	Mineral Titles Register
NGO	Non-Governmental Organisation
NMP	National Mining Policy
NSGRP	National Strategy for Growth and Reduction of Poverty
PGM	Platinum Group Metals
STAMICO	State Mining Corporation
TDV	Tanzania Development Vision
USD	USA Dollars
WHO	World Health Organisation



A typical Gold Mine

CONFLICTS ENDEMIC IN EXTRACTIVE INDUSTRIES

(Case of Gold Mining Governance in Tanzania)

1. INTRODUCTION AND BACKGROUND

Tanzania covers an area of 945,087 sq km including 59,050 sq km of inland water. It is bounded on the North by Uganda and Kenya, on the East by the Indian Ocean, on the South by Mozambique and Malawi, on the Southwest by Zambia, and on the West by Zaire, Burundi, and Rwanda. Zanzibar, a part of the United Republic of Tanzania, comprises the islands of Zanzibar and Pemba and all islets within 19 km of their coasts, as well as uninhabited Latham Island, 58 km south of Zanzibar Island. Zanzibar Island lies 35 km off the mainland coast, and Pemba Island is about 40 km to the Northeast. The former has an area of 1,657 sq km and the latter 984 sq km. This discussion on extractive industries will be confined to the mainland only and will not include Zanzibar.

Mining reform in Tanzania is only two decades old. It started in earnest with economic recovery programmes that freed, in part, state ownership of the major means of production practice of the post-independence policy framework. The reforms were manifested by a new Mining Act that was legislated in 1998. A year later gold production was at an all time high of 388,000 ounces and in the new millennium it has consistently been over 1 million ounces per annum. Gold production now accounts for over 40 percent of the country's export earnings, 75 percent of foreign direct investment (FDI) and an increasing share of taxes (3.6%) and GDP (3.2%) contributing 6% of its growth. However, commercial mining by the large mining companies has adversely affected artisanal small miners (ASM) that employs more people than the large scale miners (LSM). There have also been many problems with communities around the mines that remain unresolved to this day. Other challenges include those of human and resources capacity, infrastructure and regulatory framework. It is against this background that it is seen fit to review the mining industry, amongst other industries, and in context of good governance principles as will be done in this paper.

1.1. Governance Preview

Governance in extractive industries is a broad term but, it is essentially about processes of decision-making – who makes the decisions and on what basis – and the processes by which decisions are implemented, or not (Lugoe, 2010). In this case, discussion will be centred around this theme of decision making, in the context of extractive industries particularly gold, in Tanzania.

While governance includes policies, institutions, processes and power, it is much more about the processes and politics than the actual content of policies and laws. In extractive industries, the processes of exploration and mining rights, the participation of stakeholders in these processes and redress to disputable issues and other forms of conflict will be examined.

Governance occurs at all scales (e.g. local through national to global) and can be associated with different entities (e.g. nations, communities, corporations, households). In the national context it is not confined to governments, but includes private sector and

civil society actors. This paper shall involve several actors at different levels key of which are the people who get displaced by mining rights holders, small scale miners, large scale miners, local government at Village and District levels, Central Government involving policy makers and government operatives, private sector service providers, civil society organisations (CSO) including community based organisations (CBO) and non-Governmental organisations (NGO).

1.2. The Context of Governance

Governance moreover, is happening all the time, and is not necessarily prescribed by or confined to formal rules and regulations. Most importantly, governance takes place in a context (e.g. physical, social, political, economic, historical, etc). In the case of the extractive industries in Tanzania, the social-economic context is overriding. The industry provides employment and hence income to citizens; the export earnings enrich the economy to improve social services and infrastructure but, the context of environmental protection and land use are also closely associated with it.

Governance also involves a large number of stakeholders, who can be separated into groups and individuals who are either influential in the decision-making processes or are affected by the decisions and their enactment, or both. In the mining sector the main actors are the mining companies (big and small); the Government of Tanzania; the Communities at and around the mines who could have owned properties prior to the opening of mines and are culturally tied to the land and its environment.

Decisions once made and implemented can be expected to lead to outcomes or effects. Where decision-making processes lead to consistently good or improved outcomes then the decision-making processes would typically be considered good; similarly, weak or poor outcomes may be associated with poor decision-making processes or poor governance. The paper shows areas of mining displaying weaknesses and strengths in governance.

1.3. Improving On Governance

Tanzania's policy is for good governance and where this is found wanting then improvements are called for. There are a number of ways in which decision-making can be improved. These include developing better understanding of the governance context, which could involve mapping and collating existing knowledge or undertaking new situational analyses (e.g. case studies). This paper serves in part to contribute to governance in extractive industries and to a better understanding of gold mining and similar processes in Tanzania as case studies.

For certain aspects of the context, notably the environment, this also requires the development of better assessment and analytical tools. If however such new knowledge is to be translated into improved decision-making, then decision-makers have to be apprised of this knowledge, and understanding of its implications for their decisions. Tanzania's mining sector for example, has seen its ups and downs that led to its valley point during the command economy and resuscitated only during economic restructuring in the 1980s. The rejuvenated industry is only two decades old, but has had untold challenges. A number of studies have been carried out by experts but CSO have also been upfront reporting and investigating on mining operations to improve decision making.

1.4. Tenets of Good Governance

In discussing governance, the focus is on attaining good governance in the sector in line with the official policy. Good governance has eight major tenets namely; that it is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and is based on the rule of law. Good governance assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society (Lugoe, 2010). Unlike the general theme of the policy dialogue, transparency will not be addressed separately in this write-up but as a part of good governance.

2. PREVIEWS ON NATURAL RESOURCES OF TANZANIA

The geology and topography of the territory, though not very well studied, as will be discussed later, reveal a wide spectrum of natural resources endowments including minerals, landscapes and biodiversity. The vast areas of inland waters make Tanzania enviable as a good source of fresh water, fresh water fish, hydropower generation and irrigation, to mention a few. The long coastline estimated at 1,400 km opens up a vast exclusive economic zone (EEZ) in which fishing, limited by high water temperatures, is the main product, but minerals, gas and oil have been traced offshore. This section first presents the major natural resources of Tanzania in brief before narrowing down to those that make up the extractive industry.

2.1. Water Resources and Fisheries

Three of the great lakes of Africa lie on the borders of Tanzania and partially within it. Lake Tanganyika is located on the western border, Lake Victoria in the northwest, and Lake Nyasa in the southwest. These trans-boundary resources are managed in part through international treaties, protocols and agreements. Lakes Nyasa and Tanganyika lie in the Great Rift Valley, a tremendous geological fault system extending from Middle East to Mozambique. A 130-kilometre swath of south-western Burundi borders the tip of long, narrow Lake Tanganyika. Fish from the lake provide an important food source for many people in its vicinity. Lake Victoria, the world's second largest freshwater lake, borders western Kenya and is the inland sea shared by Uganda and Tanzania. The lake is an important source of food, primarily Nile perch, for people living on its banks. The immense lake basin feeds the Nile and is in turn fed by many rivers and streams and by runoffs from the Virunga Mountains.

Tanzania's watershed is comprised of several internal and trans-boundary river systems. Internal rivers include the Ruaha-Rufiji ecosystem, the Malagarasi River and wetlands and the Pangani, Wami and Ruvu river systems, all flowing into the Indian Ocean. They host reservoirs for water supply, irrigation and hydropower generation and are a good source of fish for local populations. Two major trans-boundary river ecosystems and water basins are the Kagera and Ruvuma. These partly provide natural boundaries with Uganda to the North-West in the former and with Mozambique to the South in the latter systems.

Tanzania is abundantly rich in fishery resources. The fisheries subsector contributes 30 per cent of food consumption in the country and is the main source of protein for most people. About 61,823 people are involved in artisan fishing out of whom 46,670 operate in fresh water while 15,153 operate in marine water. The total catch rose steadily to 356,960 tons in 1997. Fish products amounting to 37,098 tons were exported in 1997 compared with 19,625 tons in 1996. Commercial prawn fishing rose to 343 tons in 1997. Marine fishing is being promoted in the EEZ.

2.2. Forests and Wood Products

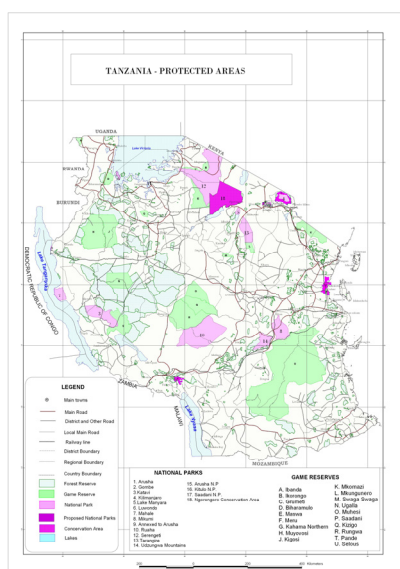
Forests and woodlands cover about 45 million ha. of Tanzania's land surface, half of this resource is on unreserved public land while most of the remaining forests are within government forest reserves. Most of the forest is savannah and intermediate woodland.

The principal species of wood in Tanzania are valuable tropical woods such as cedar, African rosewood, podocarpus and mahogany. There are also plantation forests covering an area of 250,000 - 300,000 ha, consisting of *Pinus*, *Cupressus* or *Eucalyptus* and Wattle.

Generally, the demand for wood products is higher than the supply, both for the domestic and export markets. Export trade is in fine hardwood timbers, which are well-known and popular for the domestic market, and are only exported for foreign exchange rather than as a surplus. The forest industry is dominated by mechanical wood processing-sawmilling, furniture joinery and wood based panels. There are also non-wood forest products of economic significance and with the potential for growth such as honey, beeswax, tanwin, gum arabic, wattle and medicinal plants. In 1988 honey exports earned US \$ 800,000 and wattle exports US \$ 4 million.

The problem of deforestation has plagued the forest sector for centuries. Forest loss is caused by wildfire, land use change, pit-sawing, harvesting for building materials (timber and poles), medicines and fuel wood. In recent years illegal logging and timber trade has become a major cause of forest loss in the global tropical timber trade driven by Asian

timber markets. The market is now spearheaded by China, following a Chinese policy, in 1998, to drastically cut down domestic log harvesting and allow imported supplies to their mills. Chinese imports have risen from 40 worth USD 6.4 billion, to 134 million cubic meters worth USD 16.4 billion between 1996 and 2005. Considerable quantities of Chinese imported timber originate from countries experiencing high levels of illegal logging and Tanzania is one of the victims.



2.3. Biological Diversity Including Wildlife

Tanzania has a rich and diverse spectrum of fauna and flora including a wide variety of endemic species and sub-species. The biological diversity and degree of endemism consist of primates, (20

species and 4 endemic), antelopes (34 species and 2 endemic), fish (with many endemic in Lake Victoria, Tanganyika and Nyasa and other small lakes and rivers), reptiles (290 species and 75 endemic), amphibians (40 endemic) invertebrates and plants around 11,000 species including many endemic). Besides these, Tanzania possesses important populations of species that are threatened but widespread across Africa.

Furthermore, in terms of its habitats, various grasslands and open woodlands of the Serengeti and Maasai Steppe in the north-west and north-east of Tanzania support some of the greatest concentration of large mammals in the world. The wildlife of Tanzania is a unique natural heritage and resource that is of great importance both nationally and globally. Tanzania has 19% of her surface area devoted to wildlife in protected areas where no human settlement is allowed and 9% wildlife co-exists with humans.

2.4. Mineral Resources Endowments

Tanzania has a great potential particularly for gold, base metals, diamonds, ferrous minerals and a wide variety of gemstones with some, like tanzanites, are unique in the

World. Coal, uranium, and various industrial minerals such as soda, kaolin, tin, gypsum, phosphate and dimension stones are also available. Minerals that have attracted investment capital in recent years fall within three groups. These are: (i) Gold and Diamonds that are found in greenstone belts located in the east and southern part of the Lake Victoria basin, and in the south west of the country; (ii) Basemetals found in a belt running from Kagera through Kigoma to Mbeya, Ruvuma and Mtwara regions, and (iii) Gemstones, which are found in eastern and western belts running from Kenya border in the northern part to Mozambique in the south and Mbeya and Rukwa regions.

2.4.1. Gold and Diamonds:

All in all, Gold and Diamonds have always been the mainstay of the country's mineral production and brief information on the two is here provided, in preparation for wider discussion in context of the mining industry as a whole.

Diamonds: Tanzania has been a significant diamond producer for several decades, with the bulk of production coming from the Williamson Diamonds Mine at Mwadui in Shinyanga region, where commercial production began in 1925. Over 300 kimberlites are known in Tanzania of which, 20% are diamondiferous. Some 600 dipolar magnetic anomalies with similar geophysical characteristics to known kimberlite pipes have been recorded during recent geophysical surveys. Also of relevance are the pseudo-kimberlites or para-kimberlites along the young craters where diamonds have been discovered. Alluvial diamonds have been recorded but a large deposit of economic exploitation has not yet been found.

Box 2: Other Minerals of Tanzania

Carbonates: Well over 20 carbonates associated with Mesozoic-Cainozoic volcanics have been identified in the country which could prove to be useful source of rare earth elements, niobium and phosphates.

Coal: Coal resources similar in quality to the Gondwana coals of southern Africa occur in the Ruhuhu and Songwe-Kiwira basins in the Southwest Tanzania. A total of about 1.5 billion tonnes in reserves have so far been identified.

The country's only coal mine at Kiwira has an average annual output of 35,000 tonnes - all of which is consumed mostly locally for power generation.

Industrial Minerals: Limestone and dolomite-good resources of high purity occur in the white marble deposit of the Morogoro Region. Potential for dimension stone and refractory grade limestone is therefore excellent. A variety of clays - bentonite, kaolin and fullers earth - in size-able deposits have been identified and are only scantily exploited. The Pugu kaolin deposit located some 30 kms West of Dar es Salaam has a great potential for development.

Evaporates and saline deposits of economic significance are associated with the rift valley lakes. Investigations of the Soda ash deposits at Lake Natron revealed a potential recovery of over one million tonnes a year. Currently, salt production stands at 105,000 tonnes per annum.

Graphite occurs in high-grade gneisses mainly in the Usagaran system. Sufficient reserve have been identified at Merelani, northern Tanzania, for a 40 year operation at a mining rate of 15,000 tonnes per year of high grade flake graphite of 97-98% purity. The mine will also produce Tanzanite, which occurs in association with graphite.

Phosphate deposits have been exploited at Minjingu in Arusha Region at around 48,000 tonnes per year in order to support fertiliser manufacturing. Following the closure of the fertiliser plant in Tanga, current production is mainly used for direct application.

Gold: Gold has been mined in Tanzania since German times and continues through ASM and new bigger investments made recently. Gold exploration has grown rapidly during the 1990's using modern technology and refined models. Investigation has mainly been focused on the greenstone belts around Lake Victoria with particular attention on

the shear hosted gold mineralization associated with banded iron formations (BIF), tufts and volcano-sedimentary exhalative. Several "world class" gold deposits have already been discovered in the Lake Victoria Goldfields and are at different stages of exploitation.



2.4.2. Base Metals and Platinum Group Minerals

Recent exploration in North West Tanzania has revealed extensive nickel-cobalt-copper mineralization associated with ultramafic rocks of Karagwe-Ankolean System. Sutton Resources is evaluating the resources where diamond drilling has been

outlined contained resources of 500,000 t nickel, 75,000 t copper and 45,000 t cobalt so far. In addition, chromium and platinum group metals (PGM) have been recorded in the Kagera region. There is also an indication of stratiform copper-silver-uranium type mineralization in Shinyanga region.

Ferrous Metals: Numerous iron ore bodies have been identified at Liganga SW Tanzania and in close proximity (80 km) to the coal resources of Ketewaka-Mchuchuma. Shallow drilling established a resource of 45 million tonnes grading 52 percent Ferrous. The Titanium resources are also known in beach sands along the coast.

Tin-Tungsten: Tin and Tungsten have been produced from both iode, alluvial and eluvial deposits from the Karagwe Tinfields in the extreme Northwest of Tanzania.

2.4.3. Gemstones

Tanzania is endowed with various species of coloured gemstones including the beautiful Tanzanite (blue zoisite). Tanzanite is mined at Mererani from weathered rock, sometimes in association with bands, which are also of commercial value. Other gemstones mined in the country include ruby, rhodolite, sapphire, emerald, amethyst, chrysoprase, peridot and tormaline. Recently, a major alluvial occurrence was discovered in the southern region of Ruvuma, Mtwara and Lindi. Varieties include chrysoberyl, spinels, sapphire, garnets, zircons and diamonds. Official gemstone exports were approximately USD 10 million in 1996, majority of which were exported uncut. Great potential exists in the establishment of lapidary and jewellery manufacturing industry.

3. EXTRACTION OF NATURAL RESOURCES/MINERALS

Many developing countries are also under-populated - unable to exploit, develop and put to good use their natural resources endowments. *Under-population is often seen as a stage in development when capacities (expertise and the available technology) are unable or incapable of exploiting the natural resources base of the land.* A country is therefore said to be developed when agriculture is efficient and industry, transport, trade, communication, commerce and social services are at a high level enough to meet the needs of the people. Many Governments in developing countries are mindful of the fact that making restrictions in exploitation of resources does not assist poor under-populated countries move out of poverty and under-development but, on the contrary, could worsen livelihoods as it happened in Tanzania during the command economy. Economic liberalization that taps of the natural resources is aimed, in part, at inviting investment in all sectors of the economy.

Under-populated countries are confronted with the following four problems: (a) uneven distribution of population that leads to imbalances in conditions of living between rural and urban areas, and which in turn triggers off a high rate of rural-urban migration; (b) remoteness that makes it uneconomical to provide proper infrastructure such as roads, phones, electricity and running water as well as social services such as health and education; (c) underutilization of resources. However, minerals especially, petroleum and precious metals will usually be extracted because of the desire for wealth but, only when capital can be obtained through overseas loans or foreign direct investment; and (d) slow growth of industry due to shortage of skilled labour and inadequate internal markets.

Mineral extraction is therefore seen as a way of speeding up development and moving out of under-population and underdevelopment. But, as will be discussed shortly, good governance is needed in extractive industries if countries are to reap the benefits accruing from the natural resource endowments available at their disposal. This section looks at and establishes the need for good governance in the mining sector from experiences abroad and locally.

3.1. THE NEED FOR GOOD GOVERNANCE

“For Thousands of years, the desire to possess gold has driven people to extremes – fuelling wars and conquests, building empires and currencies, levelling mountains and forests Gold’s lustre not only endures; fuelled by global uncertainty, it grows stronger. The price of gold which stood at \$271 an ounce on September 10, 2001 hit \$1023 in March 2008 and may surpass that threshold again. In 2007, demand outstripped mine production by 59 percent. Part of the challenge is that there is so little of it – only 161,000 tons of gold has been produced throughout human history with about half mined in the last 50 years” (Larmer, 2009). The laws of supply and demand are surely in operation than in any other product in setting prices.

3.1.1. Need Based on Global Experience

Large Scale Mining: World mining done by big mining companies is through large scale open-pit excavations, processing and disposal of rock and mining effluent. Open-pit mining produces three quarters of the world’s gold and is claimed to bring with it

high quality jobs, technologies and development to forgotten frontiers. In the developing world the benefits to large scale mining include: (i) lower operating costs; (ii) higher yields; (iii) few regulations – making it possible to get away with ecological destruction or the forced relocation of communities; (iv) community development that can provide communities close to the mine with electricity, health clinics, irrigation dams and support to agriculture as a corporate social responsibility (CSR).

Artisan and Small Miners: There are between 10 and 15 million artisan miners around the world today. They employ crude methods of mining but produce about 25 percent of the world's gold. This army of poor workers support over 100 million people. Yet their fate does not end there. Armed fights for the control of mines and trading routes have routinely terrorised and tortured many miners. It is estimated that 2 to 5 grams of mercury is released into the environment for every gram of gold recovered. The deadly effects of the tons of mercury, that is released by them into the environment during the process of separating gold from rock, causes severe damage to the nervous system and all major organs. Yet, for many ASM searching for gold is a family affair that involves women and children, estimated at about 30 percent of ASM. Life expectancy in mining is far below national average sometimes lower by about 20 years of more. Fatal accidents occur often caused by explosives. If death does not come by way of explosives it may be by way of carbon monoxide fumes or mercury poisoning.

Mining and Land: Gold mining for example, generates more waste per ounce of gold than any other metal. Extracting a single ounce requires the removal of more than 250 tons of rock and ore. These are piled up as mountains of infertile soil often covered by a layer of *solum* but not thick enough to sustain normal vegetation growth. Most hazards discussed with respect to ASM also apply to the open-pit working environment sometimes to a lesser degree. The effluent from the chemical processing plant is released in larger quantities and hence deadlier if not well managed. Environmental and Social damages in open-pit mining are of gigantic proportions.

3.1.2. Need Based on Africa's Experience

Experiences of various countries in Africa reflect the reality of the global experience discussed above. Only Botswana and South Africa have perhaps been foremost in translating diamond reserves into economic growth and stability. But to many, mineral deposits have been a curse. In these countries, mineral extraction has had the negative effects of attracting, fuelling or sustaining (i) dangerous working conditions, (ii) exposure to criminality, (iii) meagre and unreliable remuneration, and (iv) environmental degradation. Several national experiences in Africa serve to set the picture of this mineral curse in proper context as the following examples reveal (Grant, 2009):

- Top diamond producers in Africa are Angola, Democratic Republic of Congo, Sierra Leone and Ghana at 3rd, 5th, 7th and 11th spots respectively, *yet this has not been translated into economic growth*. The Human development Index (HDI) for 2005, for example, places Sierra Leone at the bottom and the others not far from it.
- These countries have been centres of political strife and conflict for many years. The mineral resources have played a big role in financing and prolonging civil war in all four countries.

3.1.3. Need Based on Tanzania's Experience

Recent research conducted for the mining sector of Tanzania and focused on the subject of gold mining, has concluded that mining in Tanzania has the following five characteristics (ICMM, 2009):

- a) Mining can readily become the main source of a country's foreign direct investment (FDI). If this happens the volume of domestic investment is also likely to be significantly increased;
- b) Mining can also become a major foreign exchange earner by generating new forms of exports. These new exports can easily (and quickly) supplant long-standing traditional exports in this role;
- c) Mining can often contribute a share of government revenues that is high relative to its share of Gross Domestic Product. This is because large scale mining is a visible and easily taxed activity compared with many more traditional activities including agriculture, the majority of small scale manufacturing and artisanal mining;
- d) Mining, in its more modern forms, is unlikely to contribute a large proportion of a country's GDP. This is for the simple reason that it is a highly capital intensive activity. Its contribution to a country's Gross National Income (GNI) is likely to be even smaller because of the outflows of mining company dividends.
- e) Modern mining cannot be expected to make a massive contribution to direct local employment levels. Again, this is mainly because of the high capital intensity of the activity and less because of the choices as between expatriate and local employment as is often asserted.

The last two effects (d and e) do not reflect the expectations of many in Government,

BOX 1: Contracts for new big gold mines since 1994

Source: Tanzania Chamber of Mines

Bulyanhulu in Kahama

Owned by Bulyanhulu Gold Mine Limited (5 August 1994)

Operations began in 2001

Capacity 450,000 Ounces

Golden Pride in Nzega

Owned by Resolute Tanzania Limited (5 June 1997)

Capacity 200,000 Ounces

Some initial output from 1998

Geita Gold Mine in Geita

Owned by AngloGold Ashanti from South Africa
(24 June 1999)

Operations began in July 2000

Capacity 650,000 Ounces

North Mara in Tarime

Owned by North Mara Mine Limited (24 June 1999)

Operations began in 2003

Capacity 250,000 Ounces

Tulawaka in Biharamulo

Owned by Northern Mining and Pangea Minerals Ltd
(29 December 2003)

Operations began in 2005

Capacity 200,000 Ounces

Buzwagi in Kahama

Owned by Pangea Minerals Limited (17 February 2007)

Operations began in May 2009

Capacity 200,000 Ounces

non-Governmental Organisations and the communities in which the actual mining takes place. It is partly for this reason that mining operations do not often get the desired local support and often lead to conflicts. In Tanzania land use conflicts have evolved at almost all mining sites since the rejuvenation of the mining industry. The main reason for the state of affairs has been the displacement of people and the very low compensation level that have left many dissatisfied – affecting labour relations and security

at the mines. Good governance at the mines must be established as the mines must operate within people's neighbourhoods as will be discussed in next section.

3.2. The Context of Mining in Tanzania

Tanzania's mineral potential has been known to local and foreign peoples for centuries. Alluvial mining has been a productive activity, adding to the people's incomes even before colonialism. Mining is therefore a part and parcel of people's activity and livelihoods. Organized mining started with discovery of gold deposits in the Lake Victoria and other areas on the central plateau by the Germans who operated the first mine in the Sekenke hills of Singida region, starting in 1909. Two more mines opened up in Geita and Musoma in 1913. In the British era, gold mining was expanded with more mining ventures in Mwanza and Musoma - Districts of the then Lake Province, and Diamonds were extracted at Mwadui near Shinyanga. Even before the Second World War, gold had become the second most important export product after sisal, earning the British Government over £ 1 million in 1939 alone. Mining has supported the economy of Tanzania since then. Diamond mining has been steady since then but gold production ceased between 1960s to the 1980s.

Today, Tanzania seeks to promote economic development through its macro economic strategies particularly, the Tanzania Development Vision (TDV), 2025 and the national strategy for growth and reduction of poverty (NSGRP). All sectors have developed their responses to the TDV and NSGRP including the minerals sector. The mining sector is important to the economy in that it attracts foreign investment, earns export revenues and related fees, provides high quality employment and supports a variety of spin-off economies. But, with these advantages are associated many challenges to mining where the interplay between public and private interests and interests of local communities are not made to co-exist on common ground (Grant, 2009).

3.3. Rejuvenation of Gold Mining

Tanzania has become one of the fastest-emerging gold producers in Africa, and is now the continent's third-largest gold-producing country after South Africa and Ghana. Annual production of gold is increasing by the year. Proven gold reserves now are in excess of 36 m oz (1000 t). In 2003 Tanzania reported a 20% increase in gold exports from USD 414 million to USD 504 million and accounted for more than 62% of total export revenues, compared with 49% in 2002. Each year since 1998, a new gold mine has been opened in Tanzania (see Box No.1). An increase in gold exports resulted in the signing of several gold-mining contracts between the Government of Tanzania and World class mining conglomerates The Tulawaka mine that came on stream in early 2005 was the sixth large-scale gold mine to come into production in Tanzania within six years.

3.3.1. Role of Artisanal and Large Scale Miners

Gold production was rejuvenated by the artisan and small scale miners in the 1980s as Government started to introduce reforms in the sector. Resuscitation of large scale mining has been part of the spinoff from the mining sector reform starting in 1992. Big mining companies started operating in the country also after the reforms, with large scale gold production starting in 1998 at Golden Pride Mine in Nzega District – a new mine operated by the Resolute Mining Company.

ASM was the only aspect of mining that remained operational, albeit at a small rate, when the gold mines stopped production in the 1960s and 1970s. However, the State Mining Corporation (STAMICO) continued with exploration, mining and mining

management until a paradigm shift in the industry in favour of the ASM was made. In the 1980s STAMICO's monopoly was terminated and any citizen of Tanzania could then register a minerals claim and could sell minerals through the available channels. Production from ASM improved rapidly then, supported by other developments in economic policy of the time. It can be recalled that there prevailed a shortage of foreign currency in the economy at the time. As a part of the solution to this problem, Government allowed retention of foreign currency by exporters. This could then be used to import goods without applying for the foreign exchange permits from the Bank of Tanzania (BoT). Sales of minerals could then be used to finance importation of consumer goods, equipment and spare parts that were scarce on the market. Thus the artisanal boom received access to technology, albeit at the lower end of it through this arrangement but, the measure was enough to raise production in gold, diamonds, tanzanites, and other precious stones.

A study conducted in 2005 reveals that the number of people earning a living, wholly or in part, from artisanal mining jumped from a few thousands in 1980s to 330,000 in 1993, to 550,000 in 1995. The impact of the reforms was that localized poverty was relieved, money was put in circulation in rural areas and small towns and some individuals accumulated significant investment capital. It is reported that the North Mara Mining area alone had some 10,000 small scale miners operating there. The rush for gold in this area started in 1987 and continued into the early 1990s but declined starting 1995. It is generally believed that had the ASM received support in mining surveys, the spinoffs would clearly have been in favour of poverty reduction than it is currently the case. This was an area where consultations with the ASM sector were cleared needed but did not take place. ASM generates far more jobs and puts money in the pockets of rural people that large scale mining does.

4. GOVERNANCE IN TANZANIA'S MINING INDUSTRY

This section examines the conflicts and disputes that have been reported with regard to gold, and to some extent tanzanite and diamond mining in Tanzania through its various phases, starting with mineral exploration to marketing. It presents conflicts between communities and mining companies, small and large scale miners, mining companies and the Government, the Government and communities, mining companies and the environment as well as other forms of discontent. These cover issues of: (i) land access, acquisition and use; (ii) safety in and around mines; (iii) environmental and land degradation; (iv) value for money in compensation for loss and damage; (v) mining contracts including royalties and taxation; (vi) corruption and the rule of law; (vii) primacy of policies and laws; and (viii) inadequate social corporate responsibility of mining companies.

4.1. Regulatory Framework for the Mining Sector

The framework that regulates the minerals sector in Tanzania is comprised primarily of the National Minerals Policy (NMP) of 1997 and the Mining Act of 1998 operationalising, in part, the NMP.

National Minerals Policy: The NMP defines the sector vision for: (i) a well organized private sector, (ii) a mining industry in which key stakeholders are both large-scale and small artisanal miners; (iii) regard to safety and environmental protection; (iv) sector contribution to the GDP in excess of 10 percent; (v) a well developed gemstone cutting and jewellery industry; and (vi) a sector that provides reliable employment.

Box No.4: Compensation under the Land Act (Cap 113)

To pay full, fair and prompt compensation to any person whose right of occupancy or recognised long-standing occupation or customary use of land is revoked or otherwise interfered with to their detriment by the State under this Act or is acquired under the Land Acquisition Act; provided that in assessing compensation land acquired in the manner provided for in this Act, the concept of opportunity shall be based on the following: -

- (i) market value of the real property;
- (ii) disturbance allowance;
- (iii) transport allowance;
- (iv) loss of profits or accommodation;
- (v) cost of acquiring or getting the subject land;
- (vi) any other cost loss or a capital expenditure incurred to the development of the subject land; and
- (vii) interest at market rate will be charged

Section 3 (1) (g) of the Land Act

The Mining Act of 1998 provides for: (i) security of tenure to investors; (ii) a smooth progression from prospecting to mining rights; (iii) streamlining procedures for obtaining mining licences through a mineral titles register (MTR) ; (iv) a stabilizing fiscal package that includes basic rates for such items as royalties; and (v) standardized environmental protection and conservation guidelines. Prospecting and mining rights, like property rights, are exclusive to the rights holder and are geo-referenced to the land. The obligations of rights holder and those of the government are clearly stated. The obligations cover compensation, transferability of rights, mortgages, etc.

Settlement of Disputes through Compensation: The Minerals Act consciously provides for a disputes and conflicts mechanism as is the Land Act and have both addressed issues of mitigation and resolution of the problem. These mechanisms include; arbitration, bipartisan negotiations and court hearings. In all three cases compensation for loss and damages is a major element to a resolution.

Negotiations for compensation often involve rights holders who are diverse in their interests such as farmers, herders, small miners and local and central Government authorities. Their negotiation skills are, to say the least, unable to match those of large scale miners, even when represented by Non-Governmental Organisations. Mining companies are always prepared to negotiate as they must close the mining area for security reasons and are financially able to buy out any right of the poor villagers.

The negotiation for compensation platform in Tanzania is not level. Compensation that is done in accordance with the Mining Act is only limited to damages according to the interest of the lawful occupier (i.e., replacement value). This is but a fraction of what would have been obtained if compensation was to be negotiated according to the fundamental principles of the Land Policy and Land Act (see Box No. 4). The land regulatory framework calls for consideration of opportunity cost in all negotiations for compensation. It is important to note that property that is liable for compensation is landed i.e., a surface right that has to be cleared prior to gaining mineral rights below the surface. The Land Act provisions should be followed in all such negotiations.

Mining Cadastre: The sector has developed a mining cadastre and a mining cadastre information management system (MCIMS) to operationalize the cadastre. This, in short, is a register of entries of rights holders and attributes of their rights supported by topographical maps, identity of holders and description of the rights granted to the mining concern. Unfortunately, the mining cadastre was not designed to expand the land cadastre and has hence several weaknesses.

Box No.3: Limitations to a Granted Right of Occupancy:

“Land” includes the surface of the earth and the earth below the surface and all substances other than minerals and petroleum forming part of or below the surface, things naturally growing on the land, buildings and other structures permanently affixed to the land;
The Land Act (Cap 113), Section 2.

A granted right of occupancy shall not confer on the holder any water rights or rights over the fore shore unless those rights are expressly mentioned nor shall it confer on the holder or any person acting under the authority of the holder any rights to mines, minerals, or gas or the right to appropriate and remove from the country for gain or for purposes of research of any kind any flora or fauna naturally occurring or present on the land or any paleontological or archaeological remains found on the land.
The Land Act (Cap 113) Section 22. (2)

4.2. Conflicts between Rights Holders

Minerals are by definition, not a part of land as provided in the Land Act (Cap 113) although one often has to penetrate or work the land to access the minerals (see Box No.3). The Land Act does not define a “mineral land” among its three categories of general, village and reserve lands (see the Land Act (Cap 113) section 4 (4)) perhaps, for

the simple reason that “mineral land” is not and cannot be known until discovered through mineral prospecting. Surprisingly, upon discovery of minerals on the land any land turns into a “minerals land,” overriding all categories of land except conservation areas in the reserved land category. This situation is the root cause of most conflicts between mining investors and communities and constitutes a major conflict that is derived from disharmony between land and mineral policies and laws.

Licences: Prospecting licences are often granted for lands of large extent whilst mining activity takes place on a small portion of that land. The licences engulf crop and livestock farming lands, physical developments and communal resources. The grant of licences is often unknown to those at the time occupying the land. Equally so the boundaries of a minerals rights holder are totally different from those of a property and often unknown to the latter. Consequently, claims to land by the two groups of interest often overlap.

Prospecting is a continuous process that overlaps, in phase, with mining operations. It can unveil surprises in direction and extent that are unexpected by communities surrounding the mines. It often covers properties and communal resources of villagers. As the definition of land stands, the discovery of new deposits and issuance of mining licences almost automatically nullifies existing land rights claims. The granting of mineral rights therefore calls for relocation of communities against their will. Often, some people remain on the land or hope their old lands are still available for their exclusive use when indeed have been expropriated through mineral rights granted under the Minerals Act.

An example of this situation has been reported (Lissu, 2006) at the North Mara Gold Mine in Tarime District that Barrick Gold Corporation, the operators of the mine *“has been taking by force villagers’ lands it requires for its mining operations. This is done by simply dumping millions of tons of waste rock and rubble onto village lands without even the pretence of seeking owner’s consent or payment of compensation as required by law.”* *“.... All this is done with the active participation of the district and administration and police.”* Obviously such daylight acts supported by government must be legal under one or the other of the rights granting laws.

Entries into Mining Cadastre: Mineral rights can be demarcated on the land surface but cannot be entered on a map that would indicate overlaps and gaps where these exist, as often they do. Mapping of rights claims is an essential part of both the property and mining cadastres where the claims are overlaid with other attributes on ownership. The problem of mapping is brought about by absence of appropriate base maps. Tanzania is not mapped at a scale (medium scale) that is suitable for property display. Existing base maps, of a national coverage, are provided at a small scale (1:50,000) and mostly outdated. This type of maps is too small to display individual rights claims.

The defect needs a solution that is aimed at mapping village boundaries, land resource boundaries, mineral rights, mining rights, etc, all on a single map. In other words, information on land and property rights ought to be merged with minerals rights in a single common cadastral information system. In the absence of such mapping, mineral and mining rights inadvertently lead to land disputes and land use conflicts that were not intended by any of the parties (communities, miners, government). As a result all stakeholders are brought into a conflict situation with each other over rights claims. The defect has been worsened by not harmonizing the regulatory framework, land and mineral cadastres, as well as not preparing the right tools (maps, etc) for the management of land and mineral cadastre from the outset.

4.3 Public Discontent over Contracts

Mining contracts are agreements that bring about mining investment in return for profits as indicated in discussions on the context of mining. The capital intensive mining industry often seeks to include statements in the contract that would enable the industry to recover capital investment. This means the government has to forego some of the expectations in tax revenues and royalties during this time. Conflicts between Government and its people including ASM and communities are often an outcome of the way the situation is handled as to remove discontent.

Secrecy: It has been reported in the press has reported that mining contracts are surrounded in secrecy and even parliament has not been appraised of the details thereof and some statements therein are undesirable. Several clauses have been the focus of this criticism. Firstly, Article 4.1.3 in the contract with Pangea Minerals for example, specify that the mining company will make a fixed contribution of \$125,000 by December of each calendar *year of production* to the state-run national economic empowerment fund (EEF). The year of production has been defined as the time when production from the mine reaches a minimum of 20,000 ounces of gold contained in ore or concentrate, as the case may be, during the applicable calendar year. This effectively means that for each year that the gold mine declares production to be less than the stated amount, the government will get no contribution for its EEF.

Unrest has continued over mining contracts forcing major mining companies to make concessions. In 2007 Barrick, AGA and Resolute agreed to pay annual levies of \$200,000 to local authorities and gave up their 15% tax allowances on unredeemed capital. Barrick also agreed to a \$7million a year contribution to government for a five year period (www.minesandcommunities.org/article.php?a=9371).

Legal Reviews: Public discontent is putting pressure on the government to review the Mining Act. It is expected that following the Bomani report the royalty will be raised from 3 to 5 percent. Other areas of discontent inherent in mining contracts involve land, safety and the environment.

- Land acquisition was not made with the interest of the communities in mind as discussed earlier. Mining operations are unfriendly to local communities and mining companies always wish communities could be re-settled as far away from the mines as possible. The wish negates all about people's attachment to ancestral lands. Compensation is often at such low levels as to be consumed without assisting people to re-settle.
- Mine operations are not to the level of safety and environmental standards expected of them by the Environmental Management Act. A major spill of toxic waste from the Mara mining operations into areas surrounding the mine and on to the Thigithe and Mara rivers in may 2009 for example, proved harmful to people and domestic animals who unknowingly came into contact with it.

In the North Mara Gold Mine case on safety and the environment, Bitala et al report that a family of five got sick after eating fish from Thigithe River. The number of affected people is now believed to be over 40 with over 1350 livestock also dead. The mine operators admitted over the leakage from tailing ponds into the rivers, farms and pasture



lands. Studies² have now concluded that samples taken at the time had levels of heavy metals higher than WHO or Tanzania standards (ibid.). The Norwegian University of life sciences jointly with the University of Dar Es Salaam found potential life threatening levels of arsenic around the North Mara mine. The water remained toxic for human consumption and grazing even four months later.

4.4. Cost of Doing Business and Corruption

Mining companies' major complaint to government is about the cost of doing business in Tanzania that many would attribute to the level of technological development resource and human capacities. Mining companies claim that it is not possible to speed up things. It takes over two years to process a prospecting licence, for example. Prolonged residences for foreign experienced staff are not assured either. Government revenue from mining operation is not ploughed back into the communities surrounding mines, adding to complaints for lack of social services and complaints that mining companies are relegating their CSR.

There is also the issue of corruption. Mining companies are used to paying their way through to get things done. It has been noted that the public sector in Tanzania is not that transparent or does not hold out to be transparent in their dealings with mining companies and services providers, thus kind of inviting kick backs. Transparency International's Corruption Perception Index for 2008 places Tanzania in the 102 spot out of 180 – the most corrupt. Ghana is fairing much better at 67th. An example of corruption is an on-going court case involving the hiring of the British Firm Alex Stewart Assayers, with no open tender, to audit gold mining company activities from 2003 to 2007 at an astronomical USD 1 million per month. The inefficient bureaucracy is something to contend with.

Mining companies tend to be arrogant in their relationships with government and communities, maintaining the arrogance of top down approach to Corporate Social Responsibility. They are willing to throw away money at problems, but are unwilling to cultivate working relationships with communities and local government authorities (ibid).

4.5. The Chaotic Nature of ASM

Artisanal miners seem to want to go anywhere they sense the occurrence of mineral fortunes – propelled only by their desires to earn livelihoods, but often forgetting that a regulatory framework for mining exists in the country. Their major conflict with governments is the invasion of impermissible areas such as rivers, national parks, forests, etc where mineral rights cannot be granted. Also, their use of pollutants such as lead or mercury in rivers is a major health risk the government must control.

In areas like Mererani where mineral deposits have been found, it is easy for the government to issue licenses, as have been done, to pieces of land (25m x 25m.) to small miners. But, since financial rewards come when mining is done at depths of about 100 m under the surface, ASM often take illegal shortcuts. Such mining often employs children who can work in tiny tunnels and spaces but, they are not equipped to protect the tunnels against collapse.

² A parallel study has also found lasting negative effects of the toxic spill.

5.0. CONCLUSIONS AND RECOMMENDATIONS

Governance in the gold mining industry is an area of serious concern, throughout the world, because of the conflicts among stakeholders of diverse interests who seem to lack an agreeable platform for decision making. Good governance of the mining processes could maintain stability and alleviate the dangers to mine workers and communities surrounding the mines that have turned a productive sector into a “curse” in many developing countries.

The sector stakeholders are the same everywhere and consist of government, miners both large and small and communities living around the mines. They have a variety of interests and are all affected differently by mining production: (i) The government has interest in seeing to it that FDI and exports are sustained by all miners who pay royalties and taxes while keeping the mining areas safe and the environment clean. (ii) Mining companies are keen to increase production and exports at as low cost as possible, to the mining operations, which often happens at the expense of the interests of government, the communities and small miners; (iii) Communities in areas where mining takes place need long-term jobs they cannot get, and the social and community services that can flow from the mines, but most importantly they need their ancestral lands that mines occupy and use; (iv) Artisanal small miners can go all the way as to add to environmental degradation by sifting through the mined rock and rubble, and other environmentally unfriendly operations as self employment to address income poverty the hard way.

Good governance should be able to reconcile these interests through a responsive regulatory framework for the mining industry that: (i) establishes and maintains institutions capable of addressing disputes and conflicts inherent therein; (ii) accepts the big contribution of ASM to employment and hence appropriately regulates the their undertakings. Artisanal small miners generate far more jobs and put money in the pockets of rural people that large scale mining does; and (iii) addresses concerns of communities on land ownership and use, CSR of the mining companies and generally the way miner treat them, etc. Good governance requires that mining contracts should be well negotiated and made public through established institutions. Due preparations on fairness in contracts include resource and human capacity building that aims at strengthening the contract negotiation processes.

Good governance seeks to implement and improve upon the good objectives of the NMP and the Mining Act of 1998 by harmonizing these with the national land policy and Land Act (Cap 113). The minerals Act should also be harmonized with the environmental protection Act particularly with regard to monitoring mining operations at the sites and containing toxic waste flows from mines. Areas of harmonization of the legal framework include: (i) Harmonization with regard to land ownership and compensation, mindful that the negotiation platform in compensation for loss and damages is not level; (ii) The land and property cadastre under the lands sector should be made to accommodate the minerals cadastre to avoid overlaps. In so doing mapping should be given priority so that the handy tools of the cadastre can be made available. The land and mineral rights holders should not be pitted against one another on technicalities of mapping that are solvable; and (iii) Reviews of the legal framework should be participatory in order to accommodate the interests of the disadvantaged and vulnerable groups.

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