Re-thinking mining in embattled Africa: a calculative sociological logic

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Cite as
Mtapuri, O. (2017). Re-thinking Mining in Embattled Africa: A Calculative Sociological Logic, In Artwell Nhemachena and Tapiwa V. Warikandwa (Eds), *Mining Africa: Law, Environment, Society and Politics in Historical and Multidisciplinary Perspective*. Langaa Research and Publishing CIG, Bameda p 215-236.

Introduction

The African continent is endowed with a vibrant and massive natural resource base, mainly in the form of minerals. These include gold, diamonds, platinum, iron ore, copper, oil, natural gas, coal, and asbestos, to name but a few. Because of the vastness of these minerals, the extractive sector is one of the most rewarding and exploitative industries through which equally massive and catalytic social and economic development should be derived but which has also caused untold vulnerability and exploitation of many communities without the resilience that it promises. The mining industry in Africa has the potential to bring about revolutionary and significant economic growth, which is pro-community if the moral logics and technologies of distribution and re-distribution were just and equally pro-community, a community of people with a common destiny and shared aspirations. However, many opportunities have been missed due to rampant, protracted, well-organized transnational theft of the continent's mineral wealth. A number of African countries have sought to build their economies on the back of mineral extraction. Examples include South Africa, Botswana, Nigeria, Ghana, Zambia, Zimbabwe and the oil rich North African Arab states. South Africa arguably has one of Africa's biggest extractive

industries and its massive gold, diamond and platinum outputs make the nation a mining giant. Ghana also has a vibrant mining sector and ranks second to South Africa in gold production on the continent (Akabzaa & Darimani, 2001: 4). Besides gold, Mate (2002) identified minerals such as bauxite, diamond and manganese as being available in large quantities in Ghana and these have also played a pivotal role in generating foreign currency for the country's economy.

In East Africa, Tanzania has an abundant natural resource base, mainly anchored on high value minerals such as gold and diamonds as well as gypsum, cobalt, natural gas, phosphate, iron ore, coal, nickel and tanzanite (Kitula, 2004). In Southern Africa, Botswana has substantially improved its economic performance due to the extraction of diamonds. In Zambia, copper extraction has been the mainstay of the economy for many decades. Zimbabwe reaped decent gains from mining, which saw much economic and infrastructural development, especially during the early years of independence, until the economic meltdown of the early 2000s.

In its simplest terms, mining is the extraction of minerals from the earth's crust. For Encarta (2005) it is the selective recovery of different minerals and materials, besides the recently formed organic materials from the earth's crust. Mining is an economic activity upon which many economies in both the developing and developed worlds heavily depend. In Africa, it is credited for making a tangible contribution and playing a pivotal role in socioeconomic development, especially in South Africa, Ghana, Botswana, Nigeria, Zambia, Libya and Zimbabwe, among others. Returns on the extraction and export of minerals such as gold, diamonds, coal, copper, oil, platinum, bauxite, and manganese and iron ore have boosted economic development

in many of these nations. South Africa, Democratic Republic of Congo and Ghana are ranked among the major producers of valuable minerals in Africa while the top diamond producers include South Africa, Botswana, Ghana, and Sierra Leone with South Africa alongside Zimbabwe ranked among the top platinum producers. Libya, Nigeria and most of North Africa are oil rich and this strong mineral base is partly credited for spurring economic development and growth in these nations. The following section briefly summarises how mining has made variegated contribution to socioeconomic development in Africa.

Mining has driven Africa's quest to achieve economic growth since mineral extraction is regarded as one of the major drivers of a nation's development. Besides economic growth, mining is also expected to play an important role in efforts to alleviate poverty. Poverty is a widespread problem whose effects are felt in every corner of the continent. It is as a result of these imperatives that mineral extraction is practised extensively at all levels, attracting a variety of actors that include individual or small groups of informal/artisanal miners, small scale miners, and governments as well as international mining monopolies that are mainly involved in large scale extraction. Among these groups are enclaves of winners and losers. Mining operations are a common sight in most African states, as miners scramble for every available natural resource, from river sand, to quarry stone and precious stones such as diamonds and gold in order to merely survive, or make a fortune through looting for those who loot. It is therefore critical that mining systems, processes, mechanisms and governance of mining must ensure citizens protection. Citizen protection means that their mining assets are safe and that the risk of foreign expropriation is minimised as a calculative sociological logic. Political turmoil and instability also represent risk.

Within the context of the calculative sociological logic is the concept of mining sovereignty. The logics of mining sovereignty dictate that the benefits of mining should accrue to the rightful owners of the mineral resources – the citizenry. Mining sovereignty, therefore, bestows mining's first/supreme rights to citizens to determine how they mine, what they mine and when they mine, where they mine, why they mine, who mines and who does not mine and how much they mine within the culturally accepted norms of that society; the right to beneficiate or not to beneficiate, how to sell and to whom to sell and trade while engaging in environmentally friendly and sustainable mining practices with the capability and capacity to determine the terms of trade for community self-reliance and community self-aggrandisement. This is founded on the basis that precarious mining, as practised by subalterns and precariats, cannot compete with organised transnational corporations who exploit human and material resources by denuding and stripping them and leaving little room for renewal through the use of high technology machinery and equipment and little or no hope to plough back.

Because of the importance of mining to communities, a counter narrative is required on the kind of freedom and liberation that enables current and future generations to benefit from those resources with impunity for themselves and their posterity in order to ignite a new form of accumulation which I call emancipatory accumulation by re-possession. Emancipatory accumulation by re-possession is characterised by the accumulation of assets, mineral wealth, biodiversity, and flora and fauna for the benefit of indigenous communities. Repossession means taking back what belongs to the sons and daughters of the soil by all means possible led by an indigenous intelligentsia with community interests at heart in an organic process of indigenisation..It was during

the colonial times when their possessions were forcefully confiscated and seized with no compensation. The land, the flora and fauna and the creatures that crept on them, the sheep, the goats, cows, the ducks, their wildlife and all livestock and harvests were all appropriated by colonists with unprecedented brute force and ruthlessness. When the indigenous communities tried to reclaim what belonged to them, they were labelled thieves for their harvests, livestock and land; and poachers for their wildlife - in their own lands. The changed landscape, was reinforced by the proclamation of laws and regulations that sanctified property rights to the extent that indigenous communities were stripped of their rights to their property and all that belonged to them to induce total alienation. Those rights were transferred to the colonists and their children. Therefore, repossession without compensation and no regrets becomes imperative in the interest of social and emancipatory justice. The next section provides the various benefits derived from mineral extraction which must accrue to indigenous communities, with examples from across Africa.

The "Celebrated" Side of Mining and the winners

One of the foremost and most obvious contributions of mining to African economies is employment creation. Where mining operations are established there is bound to be job creation, not only for those directly involved in extraction but those in downstream and upstream firms which either feed the mining industry with inputs or absorb some of its outputs in their operations. Gualnam (2008: 2) notes that mining brings about the 'promises of wealth and jobs'. Formal employment is ranked among the most sustainable livelihoods in many economies because of the several benefits it offers as

well as the security normally associated with formal jobs barring the exploitation and slave conditions that some miners are subjected to. Poverty levels are generally lower in households whose members are gainfully employed. Thus, jobs created by the extraction industry are good news to many, especially when returns and wages from this activity are used to address colonially generated poverties and inequalities.

Like the manufacturing sector, the mining industry has a diverse workforce, from unskilled, to semi-skilled, skilled and highly skilled jobs that are usually life sustaining. The Associated Mineworkers of Zimbabwe (AMZ) quoted in Saunders (2008) noted that, at its peak in 1995, the mining sector employed at least 83,000 workers. However, as a result of the national economic slowdown, this fell to less than 50,000 in 1999. Hawkins (2009) observes that besides formal jobs, many other people survive through informal mining jobs and activities. Thus, in an economy where a significant number of people rely on employment for livelihoods, mining is beneficial for employment creation. Jul-Larsen (2006) contends that gold mining firms have played an instrumental role in employment creation in Mali, while Kitula (2004) noted that a significant number of people worked in mining and mining-related employment in Tanzania. Jul-Larsen (2006) noted that by the end of the 20th century, an increasing number of people were engaged in informal mineral extraction in what is known as artisanal mining activities; this is common in Mali, Benin (Grätz, 2002), Burkina Faso (Werthmann, 2003), Ghana, Niger, Guinea (Keita, 2001) and Zimbabwe.

Other than employment creation, mining is also instrumental in infrastructural development. Some companies run by people with a conscience invest in improving the living conditions and welfare of their staff. This benefits local communities and the

nation at large. Infrastructural development includes the construction of roads, schools, health centres, dams and bridges, among others. The Centre for Research and Development (2014: 43) in Zimbabwe noted that companies in Bikita have electrified schools in the areas surrounding their mines. Others have constructed roads and bridges in the areas in which they operate while some build houses for their employees. Zimplats, a company operating in the Ngezi area in Chegutu District, has been applauded for constructing a state-of-the-art road linking Selous with some of the remote parts of Mhondoro District and building more than 1, 000 housing units (*The Sunday Mail,* 5 April 2011), while SMM Holdings and Mimosa Mines in Zvishavane also constructed thousands of houses for their employees. Workers will own their homes after serving the company for a set number of years (Sustainability Reports, 2011).

Mining companies have also built clinics and hospitals. While these primarily cater for staff, some extend their services to the wider community. Hwange Colliery Company owns a state-of-the-art hospital, the largest in the Matebeleland region outside Bulawayo that is the major referral health centre in Matebeleland North Province (Hwange Colliery Company Limited, n.d). Mining companies also promote education across the country. Mbada Diamonds, a company extracting diamonds in Zimbabwe's Manicaland Province constructed a school in Zvimba District, Mashonaland West Province, although this was criticised by some that argued that the school should have been built in the area where the company operates. Falcon Gold runs a high school in Matebeleland South Province and other mines such as Renco Mine (Masvingo Province), Connemara Mine, Rio Tinto, Redcliff (Midlands Province), Arcturus Mine (Mashonaland Central) and Bikita Minerals (Masvingo) operate schools. Mining company ZIMASCO owns a number of schools in Mutorashanga.

Mining companies also promote social activities such as sports, which are an important aspect of youth development. Between 2010 and 2014, Mbada Diamonds sponsored Zimbabwe's richest cup in the Premier Soccer League, the Mbada Diamonds Cup (Mbada diamonds, n.d), and soccer clubs such as How Mine FC, Shabani Mine FC, FC Platinum, Ngezi Platinum and Hwange FC among others are sponsored by such companies. Some of these clubs have constructed stadiums which are also used for socioeconomic activities. Thus, in addition to youth talent identification and development, jobs have been created outside the mining sector.

In Zimbabwe, mining has overtaken agriculture as the country's largest foreign currency earner (*The Herald,* 26 September 2013). The mining industry contributes up to 16.9 per cent of Zimbabwe's GDP and accounts for at least 50 per cent of foreign currency earnings, making it the largest contributor to the national economy. Coal mining at Hwange boosted energy generation in the country while other minerals such as gold, asbestos, lithium, platinum and diamonds record high exports which generate foreign currency and strengthen the national economy. While minerals such as coal, nickel chrome, diamonds and platinum are important, gold is the mainstay of the mining sector with a contribution of about 40 per cent to the total mineral output (Dreschler, 2001).

In 1999, mining contributed about 6,5 per cent of South Africa's GDP and 33,5 per cent of total export revenues and attracted significant foreign direct investment (FDI) after the advent of democracy in 1994 (Gaven et al., 2001). This boosted economic growth and job creation. Today, the South African economy is acknowledged as a giant, which can be partly credited to its rich mining sector. FDI also promotes international trade, which is a key aspect of development. Zimbabwe has also attracted FDI in mining, including Anjin, a diamond mining company.

Relations between Zimbabwe and China have also improved thanks to the mining industry (*The Herald*, 14 March 2014). In West Africa, Ghana's mineral wealth has been a major foreign exchange earner (Mate, 2002: 3). Akabzaa and Darimani (2001: 4) noted that in 1999 the mining sector attracted at least US$3 billion in FDI which accounted for 30 per cent of the economy's foreign exchange.

Jul-Larsen et al. (2006) noted that the growth of Mali's mining industry attracted investment from foreign mining companies. They cited three key foreign players, South Africa's Anglogold and Randgold Resources and Canadian company Iamgold that hold significant shares in at least one of Mali's four major gold mining firms. They added that gold mining made a contribution of between 40 and 67 per cent of Mali's exports between 1998 and 2003 which, according to EIU (2004) was an average US$383 million per year. Mining's contribution to the country's GDP increased from six per cent in 1998 to 14 per cent in 2002. Botswana has a long history of mining that is responsible for around 60 per cent of GDP (Isaksen et al., 2004; Lange and Musonda, 2005). In Ghana, the sector plays a vital role in economic development. In the year 2000, minerals accounted for 38.96 per cent of total exports, contributing 41 per cent of the economy's foreign exchange, and making it the highest foreign currency earner (ISSER, 2001). Besides being a leading forex earner, mining also encourages innovation and attracts new technology as host nations strive to maximise production.

The "Other", Ugly side of Mining and the losers

While mineral extraction can bring significant benefits to communities and economies, the mining industry has been criticised by academics and development practitioners from various disciplines and sectors. Rhett (2006) noted that while mineral extraction

has become an important industry in many countries as they seek to address their development challenges, exploitation of these resources is often destructive as it damages the ecosystem and creates problems for people living in the vicinity of mining operations. Furthermore, mine workers are at risk of contracting silicosis and tuberculosis (TB). With reference to Ghana, Awudi (2002: 65) argues that, 'despite the positive indicators, the role of the mining industry in economic development is suspect… despite the over U$2 billion Foreign Direct Investment (FDI) in mineral exploration and mine development during the last decade indicating over 56 per cent of total FDI flows to the country, (with the attendant increase in mineral exports) the sector is yet to make any meaningful impact on the country's overall economy'. Awudi further noted that the gains derived from the sector come at huge health, social and environmental costs to nearby communities, (to which I add psychological costs) and that there has been on-going public outcry against companies mining in Ghana (Awudi, 2002). Such concerns are common in most mining operations across Africa.

Mining is known for its disruptive impact, especially on host and surrounding communities. Kitula (2004) noted that most mining operations produce large quantities of waste material which are often inappropriately dumped, causing environmental problems. Akabzaa (2000) notes that mining activities follow a number of stages, all of which are potentially harmful to the environment, society, cultural heritage and the health and safety of those involved in extraction as well as communities surrounding the mining sites. Kitula (2004) noted that the social impacts of mining include communities being displaced from their ancestral homelands, the marginalisation of host areas and oppression of local low-income citizens. Displacement is engineered to enable the theft of minerals in a paradigm of shameless theft, brutality, exploitation and plunder. The harm done to the environment is colossal as transnationals move on

in search of new greenfields of opportunity for more robbery and exploitation in cahoots with the ‘people’s Governments – African Governments’. In many ways, African Governments by their naivety or corruption are setting back the people’s emancipation in defiance of a calculative sociological logic of distribution and re-distribution to indigenous communities for the attainment of mining sovereignty as means to an end. The means are repossession without compensation and no regrets followed by distribution and equitable redistribution. The end being mining sovereignty. The modalities repose and rest with the indigenous communities as acts of the revalorisation of their worth, wealth, capacity, capabilities, rights, freedoms and knowledge. African Governments, through their actions, can either delay or facilitate the transition to mining sovereignty. Their actions and/or inactions with regard to the environment, also impact either positively or negatively the pursuit and realisation of mining sovereignty.

Mining, thus, has significant effects on the environment and/or the social fabric of society, especially in the absence of proper management (World Bank & International Finance Corporation, 2002: 2). Kapelus (2001: 1) went further to argue that many host communities become poorer as a result of restricted access to resources, especially when mining ventures fail. Reed & Miranda (2007: 15) contend that, ‘to date, mining has a poor record in terms of its contribution to sustainable development, with few communities receiving significant benefit and mining sites experiencing lasting negative ramifications’. The corpses of buildings, disused mines and deep dump sites of waste and chemicals that penetrate the earth’s surface are some of the ramifications of mining. Many miners will never own even a minute piece of the gold, diamonds and other precious minerals they mine under very dangerous conditions both on the surface and underground. Mines represent impersonal

institutions with a total disconnect from humanity in the name of profit instead of uplifting communities' standards of living. This calls for a new discourse of mining which benefits those who work on the mines, and imparts new skills, knowledge and attitudes and empowers for the betterment of all indigenous communities as an emancipatory and calculative sociological logic. Eggert (2001) notes that most mineral-dependent nations are ranked among the poorest and worst performing economies in the world; this assertion resonates with the resource curse. Hawkins' (2009:1) account of the resource curse maintains that 'export-driven natural resource sectors such as oil, gas, minerals, precious metals and gemstones – generate substantial revenues both for the state and foreign-owned multinational businesses, yet these do not translate into broad-based economic development benefiting all sectors of the population and especially the poor'. In the same vein, Bebbington et al. (2008: 890) state that nations with rich natural resources tend to be over-dependant on mineral extraction and often fail to develop other sectors, leading to development problems as the mining sector fails to sustain the economy as a whole. Most large scale mining operations in developing countries are monopolised by Transnational Companies (TNCs) which contribute to the resource curse as many do not prioritise the development and welfare of host communities. Instead, their priority is making as much profit as possible. The *Southern Eye* newspaper (15 December 2013) noted that Chinese mining firms are causing serious damage to the environment in Zimbabwe's Matebeleland South Province, yet are not benefiting local communities in any significant way In Nigeria, Jike (2004: 686) argued that 'part of the development enigma is orchestrated by the exploitative tendencies of multinational oil companies that have plundered fossil fuels and thereby truncated the sustainability of the indigenous environments.' The author added that such 'warped development

initiatives roundly undermine the existential base of the Niger Delta people.' As such, the discourse I propose is one of a resource dividend rather than a resource curse – a blessing in Christian jargon – to constitute a mineral blessing. The edifice of mining should be configured in such a way as to benefit indigenous communities scaffolding on prudent laws and regulations promulgated by real people's governments if those Governments support their people in the quest for mining sovereignty. It behoves upon real people's Governments to ensure citizen protection and access to mining information, tools, techniques, equipment, technologies and mining markets to indigenous communities within the context of mining sovereignty.

Akabzaa and Darimani (2001: 34) raised a concern that communities which host mining activities 'have been victims of air and water pollution as well as other forms of environmental degradation resulting from mining operations.' Gualnam (2008: 1) also noted that while it may be true that most economies need to extract their mineral resources and use the proceeds to satisfy their basic needs, continuous exploitation of these resources destroys the livelihoods and environments of indigenous communities and has been identified as one of the major causes of civil unrest and wars, widespread human right abuses, poisoning of people and environments, and vegetation degradation in many communities and countries – all in the name of profit. Under such circumstances profit becomes a dirty word.

The Declaration of Principles on the Rights of Indigenous Peoples**,** Numeral 4 (cited in Warden- Fernandez, 2001: 2) states that, 'Indigenous Nations and Peoples are entitled to the permanent enjoyment of their aboriginal ancestral historical territories. This includes air space, surface and subsurface rights, inland and coastal waters, sea ice, renewable and non-renewable resources, and the economies based on these resources.' Besides these rights, Mate (2002: 3) asserts that in areas where

mining is carried out, indigenous communities and peoples 'have been the least regarded of the actors and have historically been neglected in policy and other discussions relating to many development issues such as mineral development.' McMahon (2000 in Mate, 2002: 3) adds that 'the negotiations and discussions have been primarily between governments and companies and to the neglect of those whose lives and livelihoods are impacted directly and, usually, adversely by mineral operations.' This has sparked protest by communities to fight for recognition as they assert the right to be consulted in decision making. Akabzaa (2000 cited in Mate, 2002: 4) observes that it is unfortunate that such concerns fall on deaf ears as governments regard protesting communities as 'obstacles to foreign investment' and in most cases responded violently, resulting in various human right abuses. It is an indictment that such governments fight their own people in the name of foreign investment and looting. A case in point is the Marikana. In the Marikana case, 34 mineworkers were killed, 78 wounded and about 250 people arrested when police fired on the mineworkers who were demanding a wage increase from their employer Lonmin (SAHO, 2013). Lonmin is a private platinum mining company with a strong colonial history of mining in the sub-region and an equally strong colonial affiliation to London as the company name insinuates. In this case, Government, in the name of law and order, fired on citizens – the real owners of the mineral wealth beneath the soil of the country in terms of the Freedom Charter adopted by the Congress of the People in 1955 - on behalf of business in a labour dispute which is ordinarily settled through negotiation, mediation, arbitration and the courts.

Mining and the Environment

As noted earlier, if not properly planned, mining can have significant negative impacts. This section examines its environmental impacts. Mining involves a number of stages

including prospecting, exploration, mine development and preparation, extraction and treatment/processing. Each stage has profound environmental impacts (Gualnam, 2008).

Purification of minerals like gold requires the use of chemicals which are dangerous to human and animal health. On disposal, waste chemical residue finds its way into water reservoirs, contaminating the water as well as the land. Mercury is an example of these highly toxic chemicals. It is very harmful to animals, humans and aquatic life through bio-accumulation in the food chain (Tunhuma, 2006). Mercury is poisonous when inhaled or washed into water bodies (UNDP 2005). When inhaled or when it comes in contact with the skin, it can cause lung cancer and skin diseases and if it is washed away during a process known as amalgamation, it settles onto the surrounding environment where it is absorbed and processed by a variety of living organisms. The UNDP (2005:57) noted that the amalgamation process changes mercury into a highly toxic substance and that 'the process transforms elemental mercury into methyl mercury. Methyl mercury is one of the most toxic organic compounds and a powerful neurotoxin that works its way up the food chain through bioaccumulation'. This not only poses a hazard to human and animal life but also destroys the soil and aquatic life and disrupts livelihoods, especially among those who depend on farming and fishing. Gualnam (2008) raised the challenge of mining waste and highlighted that on a larger scale, the environmental impacts of mining manifest when chemicals such as sulphur dioxide released from mines cause acid rain. Carbon dioxide and methane released from burning fossil fuels during mining results in the formation of greenhouse gases which in turn may result in climate change. Besides air and land pollution, noise pollution is caused by machinery and through extraction

activities such as blasting (Gualnam, 2008: 2). Blasting can damage miners' eardrums and condemn them to a post-mining life with impaired hearing.

In Zimbabwe, small scale artisanal mining in Umzingwane has resulted in serious degradation of the natural environment (Phiri, 2011). Soil erosion has reached serious proportions and now requires adequate management (FAO, 2004). The same is true for mining in Chiyadzwa, Penhalonga and Chimanimani (CRD, 2014) and in Bindura, Shamva, Kwekwe, Gweru and surroundings, Gokwe, Bikita, and Mutoko (Manyunga, 2012) and elsewhere. Environmentalists attribute climate change and desert-like weather which includes prolonged dry spells on the African continent to human activities, including mining.

In tropical areas where mining is rampant, the World Rainforest Movement (WRM, 2004), noted that it is a major cause of deforestation and forest degradation. Surface mining poses a serious threat to Ghana's remaining forest resources and to the rich biodiversity of its tropical rainforest, reflecting the dialectics and conflicts that occur between sustainable forest management and mining. Besides the threat to biological diversity, the WRM (2004) argues that the removal of the forest cover is swiftly drying up water sources and reservoirs, leading to water shortages and endangering animal and plant aquatic species. Communities in the tropical forest areas of Africa complained to the WRM that snails, mushrooms, and medicinal herbs among others are no longer as abundant as they used to be and stated that this was partly due to mining activities (World Rainforest Movement, 2004; Awudi, 2002). This resonates with the concern that large-scale mining activities generally reduce vegetation to levels that are destructive to biological diversity (Akabzaa & Darimani, 2001: 47). In Mongolia, the World Bank (2006: 1-2) noted deteriorating levels of water quality emanating from water pollution, waste rock piles, mercury contamination and

tailings repositories as well as air pollution, showing the ugly effects of mining on host communities.

In Zimbabwe, the drying up and siltation of dams and rivers in Umzingwane, Matebeleland South Province has been attributed to small scale mining in areas around the district (ZINWA, 2009). The effect on the storage capacity of dams has already been profound, with Bulawayo being the worst hit by water shortages (Phiri, 2011). In 2011, Bulawayo City's water consumption stood at an average of 134,000m^3 to 140,000m^3 of which 58 per cent came from the Umzingwane catchment area (Bulawayo City Council, 2011). Siltation of water bodies in Umzingwane as a result of mining and related activities has reduced the amount of water available to Bulawayo and other urban centres in Zimbabwe. Elsewhere in Manicaland, the CRD (2014: 28) noted that alluvial mining has resulted in siltation of the Mutare and Odzi Rivers while in Mashonaland Central province, EMA instructed mining companies to stop alluvial mining near and along the Mazowe River citing high levels of siltation. Chazovachii and Musingarimi (2013) note that Runde River has suffered a similar fate.

Besides drying up water sources, depletion of ground and surface water is also common in mining areas. Shoko (2005) argues that because mines require large volumes of water, mining operations are located close to water sources or at the source. Gold mining and refining requires large volumes of water and therefore imposes much strain on this resource. Small scale artisanal mining in the Amazon Basin in Latin America (Shoko, 2005) has caused water pollution and depletion of both surface and natural underground sources.

Furthermore, numerous health problems, including malaria, tuberculosis (TB), conjunctivitis, and skin diseases are believed to be directly or indirectly attributable to

mining activities (World Rainforest Movement, 2004: 43-44; Awudi, 2002). Miners are also at risk of contracting and spreading diseases such as HIV/AIDS and other transmittable infections (Rhett, 2006). *The Zimbabwean* (25 July 2011) claimed that the mining industry fosters activities like prostitution which is directly linked to the spread of HIV and other STIs. The National Aids Council (NAC) also noted that HIV/AIDS prevalence rates were high in mining areas and towns such as Zvishavane, Hwange and Bindura in Zimbabwe (NAC, 2006). Shoko (2005) suggested that the rapid establishment of settlements in newly discovered gold and gemstone areas result in the social ills associated with urbanization. These include robbery, theft, prostitution, and high levels of pollution, among others.

Mining and Society

While much of the earlier focus was on effects of mining on the environment, its social impact has received increasing attention of late. While mining can be of vital economic importance as it facilitates industrialization and promises wealth and jobs (Gualnam, 2008), it can also be a source of social discontent, civil unrest and high social costs (Gualnam, 2008). The social cost of mining is intertwined with cultural and environmental issues. There can be no gainsaying that mining appropriates land that belongs to host communities; negatively impacts health; interferes in and compromises social relationships; destroys and disrupts community subsistence and life; causes social disintegration due to radical and abrupt changes in regional cultures; displaces current or future local economic activities; and is characterised by hazardous and unhealthy working conditions (Gualnam, 2008).

Awudi (2002: 7) noted that in most mining communities, ‘the degradation of large tracts of land by the large-scale surface mines constitutes a major threat to

agriculture in the communities and their economic survival.' Akabzaa (2009: 38) also noted that 'mining companies are annexing vast lands in their operational areas and depriving communities of their chief source of livelihood'. Most rural people depend on farming for survival. In Zimbabwe, the discovery of the Chiyadzwa diamond fields in 2005/06 and eventual extraction resulted in forced displacement of local communities from their ancestral lands and resettlement elsewhere (Chimonyo et al., 2014: 13). Mwandayi (2011) notes that the Shona people are culturally attached to their ancestral land and relocation can only be done on the basis of culturally acceptable reasons, something that mining induced displacements do not respect. Furthermore, these communities lost rich agricultural land upon which their livelihoods depended, compromising their food security and exposing them to food shortages. Relocations also disrupted education, and cultural linkages, networks and practices. It is of grave concern that five years after the evictions, victims have not received any meaningful compensation despite their well-documented losses (Chimonyo et al., 2014; CRD, 2014). A number of authors have identified the impact of displacements. Akabzaa & Darimani (2001), the WRM (2004), Gualnam (2008), Shoko (2005), and NAC (2006) among many others have cited an increase in social problems such as 'prostitution, drug and alcohol abuse, gambling, incest, inadequate housing, youth unemployment, family disorganization' and dislocation and increasing rates of school dropout.

In more extreme cases, mining has caused conflict between government and mining companies, and local communities over control of minerals. While laws prohibit unlicensed individuals from accessing minerals, local communities feel entitled to the resources within their localities – their birth right had it not been for government. Denial of access can lead to violent clashes with the authorities. Akabzaa remarked that 'the growing incidence of conflict between mining communities and their chiefs on one

hand, and the mining companies on the other hand, echoes the growing concerns about the effects of the mining sector on the population' (Akabzaa, 2000 cited in Akabzaa, 2009). Operation '*CHIKOROKOZA CHAPERA'* (An end to panning) during which illegal miners were violently driven out of Chiyadzwa diamond fields in Zimbabwe is a perfect example of how conflicts can arise as a result of mining. After initially facing resistance from illegal miners, government deployed the armed forces (Chimonyo, 2014; CRD, 2014). In South Africa, 34 miners were shot dead at Lonmin Mine in Marikana while demonstrating against poor remuneration in 2012 (*Mail & Guardian*, 21 August 2012) as earlier mentioned. This is a clear demonstration of mining companies and governments' exploitation of workers and their families in pursuit of profit. It is for this reason that some commentators describe minerals as a curse and a source of conflict.

After the acquisition of the land and mineral fields in Chiyadzwa, local communities continue to face harassment at the hands of state security forces and mine guards, and many are persecuted for petty crimes such as trespassing (CRD, 2014). Hawkins (2009:15) noted that towards the end of 2008, there were numerous media reports of police and military action against illegal miners, resulting in an unknown number of fatalities. This prompted the imposition of trade sanctions on the Zimbabwe Mining Development Corporation (ZMDC) (a government mining company) by the European Union and the Kimberly Process labelled Chiyadzwa diamonds as blood diamonds that cannot be sold on the world markets (Hawkins, 2009). This was subsequently lifted after protests by the Government of Zimbabwe. Thus, mineral extraction can be a source of conflict (Bebbington et al., 2008). The United Nations (2006) noted that most wars fought in Africa and across the world are related to control of natural resources. Governments can also abuse mining gains to supress their

people; Bryant and Bailey (1997: 40) pointed out that ‘power can be used to control people’s access to a diversity of environmental resources such as land, minerals, water and forest, control over the environment of others through control over societal priorities of environmental projects hence the marginalization of vulnerable groups who are often left with a plethora of problems.’ In Zimbabwe, allegations are rife that the ZANU (PF) government used Chiyadzwa diamonds to finance the June 2008 presidential elections runoff (Hawkins, 2009). Opposition parties, civil society and private media believe that this campaign was bankrolled by diamond monies.

The closure of mines usually results in the creation of ghost towns or settlements. In areas where no other economic activities are viable, the mine and its infrastructure are usually abandoned. It is used as hiding places by criminals and can also harbour dangerous wild animals which are a threat to humans and livestock. Abandoned ghost towns can be havens for prostitution as some locals seek alternatives livelihoods after the closure of the mine. *The News Day* (11 May 2012) reported that Mhangura is now a ghost town which has been transformed into a hive of illegal activities. Other abandoned mines that have turned into ghost towns in Zimbabwe include Kamativi and Mashava.

Summarising the impacts of mining, Abdus-Saleque (2008, 25) noted that all the stages of mining, from preparation to processing, result in

> deforestation of the land and elimination of vegetation which affects the habitats of hundreds of endemic species, causes soil erosion and silting of the land, reduction of water table, contamination of the air, water and the land by chemicals such as cyanides, concentrated acids and alkaline compounds and air pollution caused by dust, gases and toxic vapour which can have diverse

effects on the environment and health and social life of the local communities (Abdus-Saleque, 2008, 25).

While a number of benefits can be derived from mining, its destructive effects on the environment and society cannot escape interrogation.

Conclusion

In conclusion, this chapter described the contradictory tapestry of mining necessitating a re-think of it. On the one hand, it has the potential to create jobs, produce minerals which earn foreign currency, and promote investment in infrastructure and skills. On the other, it can pit governments and multinational companies against citizens and produce conflict and sorrow. The miners that unearth precious minerals are totally alienated from the product. Mining thus creates winners and losers – the former in miniscule numbers and the latter in their multitudes.

Mining sovereignty behoves real Governments to ensure mining systems and processes are pro-indigenous communities. It enlists real Governments to work with communities and not against them, in a calculative sociological logic to advance the notion of emancipatory accumulation by re-possession which is deliberate, real Government supported accumulation of mineral wealth and assets for the benefit of indigenous communities for the attainment of mining sovereignty as an end in itself. A precondition for the achievement of mining sovereignty, is the re-configuration of the edifice of mining through the promulgation of laws and regulations which are pro-indigenous communities that give these communities the decision-making prerogative to determine what is mined, where it is mined, who should mine, how much should be

mined, what to beneficiate and what to sell or trade and to whom to sell, how much to keep and what to dispose of, access to mining information, logics and technologies and markets within the sustainable and culturally acceptable norms of the community and in the name of and for the sake of the realisation of mining sovereignty.

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