

Chapter 6: The role of the mining sector in poverty reduction

Introduction

It is clear from studies and observations made over time that the issue of poverty in Zambia is directly linked to the aspect of lack of fulfilment on part of the government of the basic requirements regarding the protection of human rights. Some of the human rights in question are those related to social, economic, environment and cultural issues and these rights have a direct impact on the levels of poverty in all its forms.

In addition to the above, our government has to demonstrate that it has been able to use all available resources at its disposal to meet its minimum obligations on the economic and social rights of the citizens. The poor in this regard must take centre stage in the priorities. The ability of the government to achieve the stated goals is influenced by various factors and each one of them must be scrutinised.

External assistance

Often, project assistance is more favourable than other forms of external assistance as it is associated with larger components of foreign direct investment. A local criterion must be worked out to assess the quality of external assistance and only allow those forms of assistance that have the greatest impact on the quality of life of the poor. It is unlikely that Zambia's debt problems under the HIPC initiative will be solved; they may, instead, worsen. Many analysts suggest that HIPC is pro-creditors and Zambia's annual repayments will grow. This would affect the country's ability to spend on the social sectors and therefore worsen the situation of the poor. In short, the government will be no more able to address the national health emergency, and its people will be no less tied in a cycle of deprivation at the completion point.

Economic transformation

Of great importance in the Zambian economy has been the withdrawal of the state from areas deemed better regulated by the market for private sector development. In the large-scale mining industry, all assets previously controlled by the government have been transferred to private mining companies; the government has only retained a maximum of 20% free carry interest in all of them. The economic and social outcome of this transformation has resulted in a sharp decline in the enjoyment of certain rights for a number of persons and their families who had previously been dependent directly or otherwise on the mining industry for income and/or the provision of certain essential services. This development has been exacerbated by inadequate safeguards to ensure that persons affected by these changes are protected.

The social conditions of the vulnerable groups, in particular, have not been properly monitored after privatisation, and this may be said to have contributed to the growing number of urban poor; if not checked this could worsen the poverty situation in the country. On the Copperbelt, there has been the case of the sale of Luanshya/Baluba mines to a company with no experience in the copper mining and mineral processing industry. That led to the collapse of a potentially thriving business with consequences of mass unemployment and even impoverishment for the people of Luanshya. Coupled with this, nearly all new mining companies have been awarded generous tax concessions for many years to come, and the resultant loss of future revenue to the government means that a number of vital social sector expenditure plans will

not be met. This is expected to remain so, at least in the short to medium-term period during which the mining tax concessions remain in force.

The departure of Zambia Consolidated Copper Mines (ZCCM), meant that the fulfilment of social rights for the majority of residents on the Copperbelt was no longer a reality, and the new mine owners were reluctant to fill the gap as they contended that that function was the primary responsibility of the central or local government. The local authorities in the affected towns were themselves somewhat dependent on ZCCM and given their poor capacities at service provision, the prospects for healthy lives for the residents were bleak. Measures taken by ZCCM and the government to establish a company to manage water and sanitation services on a cost recovery basis have not yielded the desired results, making most of the poorer residents of the Copperbelt vulnerable to the spread of disease.

The revised Mines and Minerals Act (1995) appears to emphasise pro large-scale mining security of tenure, as well as fiscal regimes resulting in massive tax concessions for new operators. Ironically the same Act underplays other important requirements, such as environmental management. Government revenue has been and will continue to be negatively affected as a result, and ultimately government's ability to spend on the poor.

The case of Luanshya/Baluba Mines

The source of a number of problems in relation to the social conditions of the employees of the new owner, the Binani Group, and a number of people dependent on it, lay in the nature of the Development Agreement (DA) entered into with the Government of Zambia. A clause in the DA for example, allowed the new company Roan Antelope Mining Corporation of Zambia (RAMCOZ) to depart from the approved programme of mining, which has direct consequences on the levels of employment. Moreover, lack of experience in the copper mining business, under-capitalisation as well as mis-application of some of its limited resources combined to spell doom for RAMCOZ and ultimately the people of Luanshya.

Given the numerous management problems at Luanshya since the new owners took over, a series of industrial actions became common, many of them involving delayed salaries and work benefits. The hiring of ill-qualified foreigners for jobs, in preference to qualified Zambians, did not help matters at all. Support to other businesses by RAMCOZ, as a way of boosting the local economy through the multiplier effect, much sought after as a result of an expanding mining enterprise, was little. Soon after the two year compliance on the provision of social services as practised under ZCCM had elapsed, RAMCOZ started exploring ways and means of reducing its expenditure on the same. This move affected employees and others in the wider community adversely in terms of quality of life.

As with other privatised mining companies, the protection of the environment under RAMCOZ was and continues to be threatened despite the existence of an Environmental Act (1990) and the supervising agency, the Environmental Council of Zambia (ECZ). Mining regulations and other instruments intended for the industry are even less stringent on environmental protection. The DAs on the other hand provided for delayed compliance with existing environmental regulations.

Re-settlements and the case of Kansanshi Mine

The case of Kansanshi Mine and the coming of Cyprus Amax are classic illustrations of the undue influence of corporate power over national and local governments in relation to the land interests of the communities

in the area around a mining project. Although displacement of miners and their families as well as some villagers from the area covered by Cyprus Amax's licence was expected to take place following exploration developments on the Kansanshi prospect, no acceptable compensation was offered to the miners and the affected villagers in the light of the situation. Some villagers in the wider licence area of Kansanshi were requested to re-locate by Cyprus Amax, without adequate consultations. The primary responsibility for this outcome lies in the Mines and Minerals Act as it is deficient and fails in its provisions in this regard.

Environmental protection

According to the Development Agreements entered into, all new mine owners are exempt from liability for fines, penalties or third party claims made in respect of past activities of ZCCM with regard to the environment. Even though the DAs require that new mine owners comply with the provisions of the Environmental Plans (initially part of the Environmental Impact Statements (EIS) commissioned by ZCCM) as well as environmental clean up obligations, delayed compliance was allowed for in the DAs, and the new mine owners have the power to dispute a decision of non-compliance should it be made.

The authority of the ECZ, a body entrusted to enforce environmental laws, was diminished as a result of the DAs, as the mine owner may choose in the event of a dispute to refer the matter to a nominated Sole Expert. The time allowed for implementation of the Environmental Management Plans (derived from the EIS) themselves was 15 years from the time of conception (approximately 1996). The EIS processes were criticised as lacking wide public consultation, and the ECZ did not exercise its powers to convene a public enquiry, despite the major environmental and social consequences of the continued operation, expansion or decommissioning of the mines. The failures highlighted in the foregoing are an indicator of the vulnerability of communities dependent on the mines and surrounding land in respect of the fulfilment of various of economic and social needs.

Tax concessions and revenues

DAs stipulate generous tax concessions to the mining companies and many of the concessions will remain in place for twenty years from the time of hand over of assets. The loss of revenue to the government will be considerable until the new mine owners begin to make profits that are taxable. As a result spending on infrastructure development and social needs will be hampered.

Furthermore, mineral royalties and other duties may not be altered so as to disadvantage the mine owner, while at the same time the DAs allow for favourable adjustment of the same taxes should subsequent investors in the industry get a better agreement. Foreign exchange earned from mineral/metal sales need not be retained in Zambia, and no controls would be imposed on this regime for at least 15 years from the time the DAs came into force. This scenario further highlights the potential of erosion of government revenue and hence the weakening of the government's ability to provide for the social needs of the poor and vulnerable.

Mining policy, the Mines and Minerals Act and areas of concern

Although the mining policy document and the Mines and Minerals Act are both relatively new, having come into being in 1995, Ministry of Mines and Minerals Development officials admit that there are serious anomalies with both instruments that call for urgent attention. For specific issues such as mineral taxation and environmental management, the formulation of the policy document did not elicit opposing viewpoints and highlight the backgrounds to the management of the issues in question. The intention of the government, therefore, does not reflect incorporation of divergent views on specifics and thus lacks balance.

The need for up-to-date regulations and institutional strengthening

Since its introduction, the Mines and Minerals Act (1995) has not yet been backed by mining regulations, the main enforcement instruments of the law. This is an anomaly identifying itself for immediate action just as the Act itself has been said to be pro large-scale mining. All this is in disregard of important stakeholders in the wider community and at the grass roots. Institutional strengthening or capacity building continues to receive low priority, and tasks such as the compilation of useable geological data for potential mineral bearing areas are negatively affected. The 2001 budget for this purpose is a mere US\$40,000 representing only 10% of the previous year's allocation.

There is apparent inability and/or unwillingness to enforce environmental regulations as spelt out in the Environmental Act (1990). This was brought to the fore particularly during the transition from government to private sector ownership. The liabilities and associated costs of non-compliance from the past era are extremely high and there is no clear direction as to how the clean up bill will be tackled. In addition, the regulating authorities in Zambia find themselves unable to control artisanal mining as they lack adequate operational resources for enforcement. Environmental destruction is the single most visible aspect of artisanal mining, resulting in acid mine drainage, deforestation and pollution of river systems. The experience in Zambia is that the regulatory authorities and the mining companies do not treat socio-economic impact assessments as equally weighted counterparts of the bio-physical environment in environmental management.

The special case of small-scale and artisanal mining

The small-scale mining sector still lacks a supporting financial sector, equipment and appropriate technology for expansion. Artisanal mining (small-scale mining at subsistence level) is a poverty driven issue and its numerous problems of safety, health and environment must be tackled by a comprehensive approach. Artisanal mining is not supported by any legal or regulatory frameworks and yet it is this sub-sector that has the ability to provide livelihood opportunities to a large number of people. The use of inadequate mining and mineral processing techniques in this form of mining leads to low productivity and recoveries of mineral values. The resultant low revenues and the inability to accumulate funds for investment mean that productivity cannot be improved and this traps the miner in an unending poverty cycle.

Socio-cultural barriers prevent the effective participation of women in informal mining, despite their involvement in the sector in large numbers, especially in downstream processing stages.

Most mining laws, as is the case in Zambia, also subject small-scale mining to special regulations, which inhibit the growth of small-scale mining, thereby aggravating its already unfavourable position. There is, therefore, urgent need for a review of Zambia's mining laws to take into account the special needs of

small-scale mining. Centralised licensing of mining rights, too, hampers the participation of many people, hence the proliferation of informal mining. An essential pre-condition for promoting the status of informal miners is to encourage the transferability or mortgageability of mining rights. In this way poor people can access a wide range of resources for their sustenance.

Goals for poverty reduction in the long-term

The mining industry's contribution to employment generation for the locals is especially important. Large-scale mining could absorb up to 20% of the employable workforce and achieve market wages in line with trends in the Southern Africa region. There should be increased contribution to export earnings as well as government revenue from royalties and other taxes. As other sectors of the economy grow, the contribution from mineral earnings in percentage terms - not monetary value - should decline to around 50%.

There should be realisation of the full development of other mineral resources in the base metals, such as iron, copper and cobalt (Nambala, Lumwana and Kansanshi), and energy minerals in coal and hydrocarbons (Maamba, Luangwa and Zambezi valleys). Other resources that require further exploitation are semi and precious minerals in amethysts, aquamarine and emeralds (Kalomo, Lundazi and Ndola rural belts), and industrial minerals such as building sand, clay and limestone that are spread throughout the country. This should include the active participation of the small and artisanal mining sub-sectors. It should be noted, though, that the lack of geological data can inhibit private-sector investment in a country's mining sector, and this can prevent appropriate use of existing mineral resources for economic development. Local markets for open and transparent trading in minerals and metals should also be developed, in addition to lending support for the establishment of value adding downstream processing industries in the sector.

To grow with the above should be the supply of supporting goods and services, be it on the Copperbelt or any of the small-scale mining districts of Kalomo, Lundazi or Serenje/Mkushi. Support should be provided for the establishment of infrastructure and social services in the areas in which mining takes place. The mining companies must work in partnership with local businesses (mine suppliers) to improve the quality and delivery of goods and services. However, the volume of business should have realistic targets both in terms of quantity and monetary value.

The Environmental Fund, which is managed on behalf of the Minister of Mines and Minerals Development by the office of the Director of Mine Safety needs to be fully operational and open to public scrutiny. Financial safeguards must be built into the Environmental Fund should mine closure unexpectedly be brought forward for a particular operation in the light of drastic changes in metal prices.

Economic planning at regional (i. e. the area in which a mining project operates) and national levels must seriously incorporate the fortunes of those local industries directly or indirectly dependent on mining, with a view to minimising the negative impacts of dependency. In the same vein, some mine-supported infrastructure must be managed so as to act as an engine of growth for other sectors during post-mine closure.

Strategies that can impact on poverty reduction in the short-term

There must be prudent and well-planned use of revenues from mineral royalties and other taxes to address pressing social needs. Speedy development of a legal basis for directing a proportion of mining project revenues to local development initiatives is necessary. There is also need to put in place a realistic mining policy as well as an Act of Parliament, with objectives balanced between those of the industry, the community in which mining occurs and government. There is need, too, for the establishment of an effective and corrupt free regulatory authority for the award of mining rights that seeks to give preference to the original inhabitants of the land, rather than to newcomers. This would be in recognition of the right to mine for local residents in areas where minerals occur; in the same way that access to land as an asset is recognised.

Further, mining projects should design programmes that ensure that women are not marginalised, since women are usually in a disadvantaged position economically and socially. Mining developers and operators should institute a women's section, as part of their community relations unit, to ensure the active participation of women in consultation processes at all levels of activity.

The geological mapping of Zambia currently covers 40% of the country's area but mineral potential exists throughout the country. The Geological Survey Department must intensify the search for all types of minerals and improve the availability of geological data for the rest of the country. This should be treated as a priority area and adequate resources in the national budget should be allocated for this purpose.

Issues related to large-scale mining

In line with the provisions in the Development Agreements, there must be speedy establishment and implementation of local business development programmes. These should be aimed at promoting local businesses and contractors and this must be supported by a fund. Protectionist statutes or laws that will protect Zambian mines and mineral products from unfair international competition should be instituted. This will make Zambian mines stable and, therefore, focus on long-term goals, leading to employment creation. Furthermore, improvements in the banking and insurance Acts of Parliament should be effected, to compel privatised mines to retain their profits locally, thereby boosting foreign currency availability, as well as bolstering the strength of the Kwacha. This will increase the mining sector's contribution to the Gross Domestic Product.

Large-scale mining companies should be encouraged to develop mineral properties for subsequent exploitation by small-scale operators. A good example of this is in the quarrying of limestone, where artisanal operators could engage themselves. In some parts of Lusaka, communities surrounding disused quarries subsist on extracting and breaking limestone rock for building purposes. However, environmental degradation as a result of the illegal quarrying should be closely monitored by the government agencies concerned.

Residents of former mine townships (not necessarily employees of new mine owners) that are prone to pollution, for instance due to sulphur dioxide emissions, should be catered for under the mine operator's health schemes. The degree of access to the health facilities should be agreed upon with the local authorities, as this is important in ensuring unnecessary exposure to polluting substances that may cause severe health problems. Unplanned settlements within mining licence areas, that are prone to subsidence or development of sinkholes as a result of underground mining, should receive priority in the allocation of new habitable land. An example of these are settlements within the Nkana Mining Licence area near

Mindolo, known as Nkandabwe and St. Anthony, which have been in existence since the mid-1970s. The consequences of continued stay by squatters poses a great danger to their safety.

Development Agreements entered into with new mine owners must be revisited to improve upon societal responsibilities. The main issues are the tax regime and the environmental responsibilities that have been assumed by the new mine owners and which are generally considered to be inconsistent with the interests of the public.

Priorities for artisanal mining

Government must take the basic steps to formalise the informal mining sector to ensure that the problems of environmental degradation, waste of mineral resources and poor health and safety of workers are arrested from further deterioration and subsequently improved upon. The security of tenure of mineral properties and their transferability are essential for the disadvantaged communities, which include artisanal miners. In the case of illegal quarrying of limestone, such as in the Lusaka area, the large numbers of people involved should be organised into formal groups and mineral titles awarded to them. Provision of extension services to artisanal miners in modern mining and mineral processing techniques can help increase productivity, mineral recovery, revenues and the protection of the environment (as in the World Bank supported road shows). Coupled with this would be the development of model mines in remote rural communities where informal mining takes place. The model mines would act as training centres and help artisanal miners transform to modern mining.

The establishment of creative financing arrangements to be accessible to small-scale miners, such as those supported by third party guarantees and do not require traditional collateral, should be a priority. Artisanal miners need to be encouraged to become entrepreneurs and consider mining as a business; there should also be recognition of the significance of women's involvement in artisanal mining as owners and operators.

Open and fair trading in mineral products

Open and fair trading, such as on the gemstone exchange market, is an effective way of capturing most of the precious mineral production that is currently lost through unscrupulous trading. Licence holders who have titles over unproductive mineral properties as a result of lack of financial and technical resources should consider transferring their mineral rights (with legal back up) to enterprises with the ability to develop the mines. The original licensee would then benefit from payment of royalties. Currently there are nearly three hundred such licence holders who may be said to be "hoarding" mineral goods.

Issues affecting the wider community

Appropriate financial services need to be put in place to ensure that social infrastructure, supporting a wider community and left in place after a mine has ceased business, continues to operate as long as possible. In addition, an environmental fund for clean up and land rehabilitation should be instituted. Transition in mine ownership, restructuring and in some cases closure, often have negative social and environmental impacts, especially on the poor, and these need to be planned for carefully. Socio-economic Impact Studies (SEIS) and Compliance Monitoring should be accorded proper importance, in the interests

of long-term self-preservation of the communities where mining takes place. In this vein, mining companies and civil society must work in partnership to effectively deliver social provisions and, where appropriate, encourage the integration of environmental and social assessments.

People involved in non-mining activities that require rock breakage should be accorded more opportunities to train and qualify to hold blasting licences. The skill and licence facility is particularly useful in non-mining operations, such as construction of water wells for safe water provision and sanitation. The Lutheran World Federation (LWF) has submitted that some of its staff engaged in water well provision, especially female technicians, were disadvantaged from applying themselves fully due to the non-possession of a blasting licence.

A brief discussion on mining and its relation to the known dimensions of poverty

The fundamentals of long-term success for the mining companies will be their ability to align the interests of local communities with their own in areas where they wish to develop and operate mines. Such an alliance will be based on mature and respectful partnerships; to achieve this companies must be sensitive to the lifestyles and value systems of those affected by mining. Mining companies must also play a more active part in ensuring that a fair proportion of the benefits of their activity flows to those most directly affected. The following sections make reference to small-scale mining due to its strategic importance in tackling issues of poverty.

Some forms of small-scale mining can be dangerous and destructive, causing negative environmental effects. The more organised types of small-scale mining have a number of advantages for poorer communities as the income generated goes straight to the people involved, not to a company or government. As small-scale mining is usually labour intensive, it is an effective way of creating employment, much more so than large-scale mining.

Opportunities and threats

In mining, there is the creation of direct and indirect employment, and this boosts the local economy in which the mining project operates. Often, many of the jobs created go to people from outside the area in which the mine operates due to lack of skills in the local area. Yet it is the locals who normally bear the brunt of the negative impacts of the mine and are, therefore, disadvantaged. Mining projects attract large numbers of people in areas where they operate and disturb the traditional way of life. Injections of large amounts of cash into these areas can cause a widening of economic disparities and increased social tensions. Abuse of alcohol, gambling, crime and sexually transmitted infections are usually a consequence of this. The social impacts and upheavals which mining projects introduce fall more heavily on women, as they bear them disproportionately in comparison to the men. Some of the adverse impacts are in the form of sexual harassment, domestic violence, rape and prostitution.

Appropriation of land and other resources by a mining project, if not undertaken properly, can make the affected people feel exploited, vulnerable and angry. This may create a situation where some people see violence as the way to correct the situation.

The degradation of the natural environment (land, watercourses and forests) which is a source of livelihood for local communities, can also be a major cause of opposition, serious disputes and violence.

Men and women have different perspectives on development and this includes those in mine project development. Men's agendas tend to focus on power, prestige and economic gains (compensation, royalties, equity etc.), while the women's concern focuses primarily on issues relating to family and community stability. Proper governance structures in areas where miners operate are essential to ensure continued support to this sector, especially in the avoidance of the use of child labour.

Mining at the small-scale and artisanal level and for communities that are endowed with mineral resources must be turned into a viable economic option and not merely treated as a last resort alternative. Small-scale and artisanal producers must be encouraged to sell their mineral products in competitive markets and in turn pass on the benefits of their trade to their local suppliers of goods and services that are needed for continued operations.

Capabilities

Mining companies have an obligation to put training programmes in place, aimed at enabling local people acquire the relevant skills and to participate in the economic process. In the short to medium-term, the training provided to miners and other skilled workers is likely to have positive spill-over effects on the surrounding population. Also, companies that supply mining projects with goods and services may receive training in order to bring them up to international standards for quality and reliability.

The provision of previously lacking essential social services by a mining project in an area can mean major improvements in the standard of living of the people in the wider community, other than the immediate mine employees.

Security of continued enjoyment of rights

Since a mining project may only impact positively in one locality in terms of social service provision, while neglecting surrounding communities, the disparities so created can give rise to social tensions and cause unwarranted migrations into the project area. Although higher incomes, nutrition and health are realities that go with successful mining projects, local populations - in particular the poor, may be exposed to serious health risks, insecure income and, therefore, inferior spending power. There are also work related injuries and exposure to infectious diseases. The relatively higher incomes of mine workers, especially in isolated areas, can lead to rising local prices with the poor being left behind.

Often, after the mining project has ceased operations and especially in the absence of a well articulated closure plan, support service infrastructure cannot always be maintained by local authorities who have limited resources. This can cause hardships for people in those communities. Macroeconomic mismanagement can be harsher in the context of mining than in a non-mining economy, as a mining sector can inflate wages and keep the exchange rate strong and prevent other sectors from the opportunity of export driven growth.

Illegal trade in precious stones, such as diamonds, has helped fuel regional conflicts in many parts of Africa. Little effort has gone into development of policy instruments to combat this observed scourge.

Larger mine operators must seek to work closely with small-scale and artisanal miners on their mineral properties, where this is possible, to avoid the possibility and often dangerous action of claim invasion by unlicensed miners. This maintains harmony between the various interest groups.

Empowerment of locals

Since mining projects assume temporary ownership of land on which mineral concessions are given, practical steps should be taken to ensure that the local people from whom the land is taken are adequately compensated. For most traditional communities, land is their legacy from the past, the livelihood provider in the present and the security for the future. Control of the royalties from mining is a sustainable way of compensation, as opposed to mere cash awards at the beginning. Local people living within the mining project area should be accorded the right of appeal on their land during negotiations, and if they are dissatisfied with certain decisions on their properties they should have the possibility of having such decisions rescinded. What should be negotiated for is the right to explore or mine the land, under certain conditions, and not the transfer of the land. To deny the affected people the right to negotiate is to rob them of the ability to influence what happens to the resources that are the basis of their economic and social wellbeing.

When the local people are involved in the formulation of a Development Agreement, they get into a position to set their own goals for environmental and cultural protection, and also ensure their implementation while providing for the community's long-term financial security through modern mine development. There must be in place a public disclosure plan that should incorporate as many interested parties as possible. The information contained in the plan must be as simple as possible to be understood by all concerned. Involuntary resettlement may cause severe long-term hardship, impoverishment and environmental damage if not planned properly. Mining induced resettlement must involve wider community (grass roots) consultations and planning, such that the affected persons' livelihoods are not diminished as a result. The affected persons must have the power to influence the outcome of the negotiations. Finally, there should be a provision for low-impact small-scale artisanal miners to be allowed to continue operating in those parts of the mining licence areas not currently being used by the large-scale mining licence holder.

Recommendations

According to discussions with various civil society groups, the following are recommended for action. Table 6.1 highlights some of these recommendations.

- i) There should be immediate licensing of artisanal mining activities countrywide, and this should include groups of people who illegally quarry limestone in the Lusaka area. Decentralisation of the granting of licences will also greatly lessen the burden of red tape for small-scale miners.
- ii) Small-scale and artisanal miners must be supported in the event of the need to transfer or mortgage mineral rights to other parties that possess the resources to manage mining.
- iii) The right to mine for those people living in mineral rich areas should be recognised in the same way land is recognised as an asset.

- iv) The creation of model mines where there is mineral potential is cardinal as these would act as points of technology and skills transfer to rural mining communities.
- v) Free and transparent local markets should be established for the purpose of selling precious minerals that are currently earning less than a tenth of their true market value due to illegal trading.
- vi) A major portion of revenues from mining projects that accrues to the government should be directed towards the development needs of the communities in which mining occurs, by way of royalty sharing.
- vii) There should be increased funding to critical departments of the Ministry of Mines and Minerals Development for mineral exploration and compliance monitoring of mining activities.
- viii) The current mining legislation should be accompanied by updated mining regulations that incorporate the needs of small-scale and artisanal miners.
- ix) Socio-economic impact assessments should be accorded equal importance as environmental impact assessments.
- x) There should be full development of mineral resources in all sectors to improve the revenue base of the government.
- xi) Development Agreements entered into with new investors should be revisited in terms of tax regimes and environmental requirements.
- xii) Government must encourage mining operators to establish business development units to assist local communities. This concept is accepted internationally under the Partnership Forum initiative.
- xiii) Government must protect mining companies from unfair competition by enacting favourable statutes, while at the same time compelling mine operators to invest their profits locally.
- xiv) Unplanned settlements in mining licence areas should be re-located and be accorded top priority in land allocation.
- xv) Opportunities for persons engaged in non-mining activities to acquire rock-blasting licences should be expanded, especially for applications in water well construction.

Table 6.1: Scheduling of some selected strategies in the mining sector for impact in the short-term

Activity	Stakeholders	Time period in months												Expected results	
		3	6	9	12	15	18	21	24	27	30	33	36		
Licensing and regulation of artisanal miners.	Artisanal miners Civil society Government Financial institutions														Improved safety, health and environmental issues of the sector. Also better prospects for financing.
Provision and assistance in legal transfer of mining titles to mineral properties.	Communities Civil society Government Investors														Royalties to accrue to local communities with mineral potential where mining activities were dormant.
Targeting of award of mineral rights to local or original inhabitants of mineral properties.	Village authorities Civil society Local government Heritage associations														Improved relations between central government and rural communities and better income/revenue distribution.
Provision of technical extension services and setting up of model mines.	Educational institutions Small-scale miners Large-scale operators Government														Better techniques acquired by small-scale/artisanal miners in mining and processing of minerals. Transformation to modern mining.
Delivery of entrepreneurial training courses to small-scale miners.	Educational institutions Miners Business houses Local government														Small-scale miners transformed into entrepreneurs and their incomes improved.

Development of a legal basis for the distribution of mining revenues to local people.	Mine owners Local/central Govt. Civil society Communities														Deserving income recipients targeted and their economic status improved.
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Mounting of special programmes to encourage the participation of women as miners and owners.	Women's groups Civil society Government														More women recognised as mine operators and owners of mineral rights.
Capacity building of miner's associations in Ndola rural, Kalomo and Lundazi.	Miner's associations Government Donors/financiers Business houses														Restructured organisations that are able to effectively deliver results to their membership.
Creation of women's sections within mining companies' community relations departments.	Women's groups Civil society Government														Women's rights upheld and their social positions improved.
Institutional strengthening of Mines Ministry Depts.	Government Co-operating partners														Improved dissemination of geological data to small-scale miners.

Development of mining regulations, revision of policy and Act.	Industry Communities Government	■	■											Broad taxation and revenues to benefit local communities. More small-scale and artisanal miners assisted.
Implementation of socio-economic impact studies and monitoring.	Civil society Mining companies Government Donors and others				■				■				■	Status of communities improved and long-term security assured.

