

## **Addressing the social impact of mining activities on communities for sustainability**

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*It is very important to consider the social impacts of mining activities on the surrounding socio-economic environment, affected individuals and communities and to incorporate Social Impact Assessment (SIA) into the operational activities of a mine as a management tool. However, the practice of SIA by mining companies is often largely lacking, which has contributed to severe social impacts on communities, especially in the developing nations of the world. To avoid such socio-economic marginalisation by mining companies, the government of South Africa requires mining companies to develop and implement **Social and Labour Plans (SLPs)**, which focus on promoting the long-term development of their workforces, employee households, communities and regions.*

From the day a mining operation starts, it is immediately in a closure phase, counting down the clock until that inevitable day when the doors of the mine will close. Once mines close, the social impacts on employee households, communities and regions are mostly severe and long term, leaving thousands of people impoverished. Ghost towns develop in areas that were once heavily reliant on mining for economic sustainability. The majority of these people who were dependent on the mining operation for income are usually left stranded in an area that they cannot escape from, due to a lack of resources and capacity to ensure their sustainable integration into other sectors of the economy. The more affluent and skilled individuals usually leave the area and are able to successfully migrate to other economic activities and become reabsorbed into the economic mainstream. However, this is mostly only a minority of people

There is also often a lack of proper planning in the placement and rehabilitation of mine infrastructure, land and waste dumps in considering the future social and economic impact on communities and development for the region. After closure, mine waste deposits and unproductive, disturbed land are often left behind, which precludes the productive use of economically valuable land for the socio-economic development of communities over the long term.

### **IMPORTANCE OF THE SOCIAL IMPACT ASSESSMENT (SIA)**

Mining development in the past has characteristically been synonymous with a disregard for its social impacts and affected communities. In many instances, mining companies have invested huge amounts of capital in African countries for mining development and openly stated that they are contributing to socio-economic development at a grass roots level in mine-affected communities. In reality, however, communities in the developing world have usually been completely bypassed by any development benefits from the project and are often left in a marginalised state, in which they are far worse off than before the mine opened.

Surrounding communities generally develop around a mine and become dependent on the economic opportunities generated by it, especially within isolated rural areas. Apart from these dependencies and economic impacts, the social impacts are usually

felt even more, i.e. squatting and low living standards, social ills (alcoholism, prostitution, drug addiction, women and child abuse, spread of disease, HIV/AIDS, etc.), disruption of traditional lifestyles and livelihood systems, increase in violence and crime, idleness and a disregard for traditional culture, etc.

The challenge is to come up with innovative land uses, closure scenarios and waste management solutions that can promote sustainable development in affected communities.

Recent legislation in South Africa, such as the Broad Based Socio-Economic Empowerment Charter (BBSEEC) for the Mining Industry and the Mineral and Petroleum Resources Development Act (MPRDA) have confirmed the requirement for mining companies to assess the social impacts of their activities from start to closure, and beyond. Unless a mining operation has considered the social impact and documented it, the Department of Minerals & Energy (DME) will not issue a mining right to the applicant (MPRDA Regulations, 2002). Mining companies also have to compile and implement a Social and Labour Plan (SLP) to promote socio-economic development in their affected communities and to prevent or lessen negative social impacts. Moreover, monetary institutions, such as the World Bank, will also not fund mining projects unless detailed social studies are undertaken.

These are key challenges for the mining industry, which must be incorporated into each mine's planning and operational processes.

#### **KEY ASPECTS OF A MINING SIA**

Some of the potential socio-economic impacts resulting from new and existing mining operations and from eventual mine closure are:

- The extent of general development in the area as a result of infrastructure and services provided by the mining operations, e.g. electricity, healthcare and transport
- The economic changes that may occur or have occurred as a direct result of the opening of the mine, e.g. economic returns to local settlements through royalties and mine taxes, and mine development initiatives
- The likely direct economic changes that may occur as a direct result of the mine closure, e.g. loss of jobs at the mine (permanent employees and contractors) and the impact of such changes on the local settlements, community organisation and lifestyles
- The extent to which skills and enterprises in the local economy are dependent on the mine and its activities; influences from outside; interventions by government, industry, NGOs, etc.
- Cumulative impacts on the regions, i.e. the impact of the migrant labour system on labour-sending communities
- Cumulative impacts due to the development of numerous mining waste deposits in a given area
- An analysis of alternatives for closure regarding infrastructure, livelihood projects, etc. and for land use for the establishment and re-mining of tailings disposal facilities

## **PURPOSE OF AN SIA**

The SIA focuses on the identification and mitigation of both positive and adverse social impacts that may arise from a given project such as the establishment of a mine. It usually forms part of the Environmental Impact Assessment (EIA) process, but has often played much less of a role than the biophysical assessments.

The main aims of an SIA are:

- To understand the socio-economic characteristics and baseline of the area that will be impacted by a given mining project and how these relate to the dynamics of affected communities and economies
- To identify the stakeholders, including landowners, farm residents, government and tribal institutions, businesses, NGOs, etc.
- To undertake a detailed Public Consultation Process (PCP)
- To describe the socio-economic issues that may become problematic if not adequately addressed
- To quantify and assess the socio-economic impacts likely to result from the construction, operation and closure phases of the project and to develop relevant mitigation and management measures to be implemented
- To describe the existing opportunities for socio-economic upliftment, sustainable enterprise development and community livelihood development, which may act as a trade-off against any socio-economic impacts
- To provide sufficient information for the compilation of a realistic and logical Social & Labour Plan (SLP)

## **THE FOUR BASIC STEPS IN A MINING SIA**

### **Step 1: Preliminary assessment and identification of communities (scoping)**

During this phase the mine should undertake a broad analysis of the social environment affected by its operations. This step will focus on the identification and definition of communities that are affected by the mine. All relevant stakeholders within the mine-affected regions should also be identified, i.e. government authorities, NGOs, industry, community-based organisations, youth associations, women's associations, environmental associations, etc. A consultation process with interested and affected parties should be initiated in this phase to record the key social issues. A preliminary description of the socio-economic environment, potential social issues and likely socio-economic impacts should be provided, as well as a detailed plan for what will be investigated during the 'profiling' stage (or Baseline Socio-Economic Study-Survey).

### **Step 2: Baseline Socio-Economic Study-Survey (BSESS) and profiling of the community**

The objective of the BSESS/profiling is to determine the baseline socio-economic characteristics, profiles and dynamics of mine-affected communities and areas. The baseline will indicate the 'true' needs and factual information on these communities/areas, thereby enabling appropriate identification and quantification of the social impacts, as well as enabling the planning/formulation of community development interventions and livelihood-creation initiatives. This will ensure that the

SIA and community development programmes are contextually appropriate, focused on broad-based empowerment and provide for the true development needs of people, and that they also take into consideration the broader socio-economic conditions and sustainable development plans of the region within which the mine is located. A BSESS will focus on the mine's defined employees and households, on its affected communities (including surrounding and labour-sending communities), identified in Step 1, and on the municipal and provincial regions of location.

For the BSESS a questionnaire or interview survey is conducted with the mine's target communities. The focus of the survey is on collecting qualitative and attitudinal data with key individuals, informal leaders, focus groups and others, i.e. a survey with the workforce, a survey directly with affected community households, etc. The study should provide baseline socio-economic information on local conditions, local knowledge, local attitudes and perceptions. All of this is necessary to be able to assess the potential short and long-term positive and negative effects of the various project alternatives. This step will also include a detailed analysis of the current socio-economic conditions of the broader municipalities and regions impacted by the mine, as well as current sustainable development strategies or initiatives and programmes within these regions.

The information should then be captured into a socio-economic database (electronic), which will be used as the basis for analysing the social impacts and for managing and monitoring future development programmes. The database will contain the profiles of the affected communities, with information from the BSESS relating to: socio-economic status and livelihood profiles; household economic profiles; employment status; agricultural involvement; income streams, home ownership and the state of loan repayment on these homes; household assets; education and skills profiles; health and welfare status; cultural background; demographic information on the population; and perceptions and aspirations.

### **Step 3: Assessment of impacts**

Based on the outcome of the BSESS and the issues arising from the community participation process, the positive and negative potential socio-economic impacts are assessed. These impacts should be quantified in terms of: (i) extent (local, immediate surroundings, regional); (ii) nature (what causes the effect, what will be affected, how will it be affected); (iii) duration (short term < 5 years, medium term = 5–20 years, long term > 20 years, permanent); (iv) probability (improbable, probable, highly probable, definite); (v) status (positive, negative, neutral); and (vi) significance (no effect, low, medium, high, severe). Apart from a quantitative assessment of the impacts, most of the assessment should focus on providing a clear, descriptive indication of the social impact relationships due to the nature of the data, which are qualitative and based primarily on people. As such, it must be emphasised that it is not easy to measure social impacts and to apply Environmental Impact Assessment methodologies to people.

### **Step 4: Formulation of a Community Development Action Plan (CDAP) or Local Economic Development Plan (LEDP)**

Based on the BSESS and the impacts identified in the SIA, a detailed CDAP/LEDP should be formulated indicating how the mine will implement sustainable community development and social upliftment in its affected communities. In the South African

context, the CDAP/LEDP will fall under the prescribed SLP, which is required by the MPRDA and BBSEEC for companies undertaking mining projects, as explained earlier. The CDAP/LEDP is usually prepared along with the SIA in order to provide a social plan with initiatives that will promote the ongoing sustainability of the community during the window of opportunity created by the mining operation.

The CDAP/LEDP is usually formulated in conjunction with government authorities, local communities, other stakeholders and the mining company. The implementation of the CDAP/LEDP should continue after mine closure into the monitoring phase. It should identify opportunities for social development and propose specific projects that may lead to long-term sustainable development in mine-affected communities. Projects should focus on the provision of infrastructure and basic services, and on the eradication of poverty or livelihood development.

## **CONCLUSION**

The social impact assessment (SIA) should not be regarded by mining companies as a moral responsibility, but as a tool to be used to promote sustainability for both the mining company and the affected communities. After all, they are both part of an integrated community that has definite inter-relationships which should be used for regional socio-economic development. Managing and assessing the social impacts of mining operations will ensure strong relationships with interested and/or affected parties and also ensure favour with the governments of those countries, which will equate to economic benefits for all stakeholders. If mining activities are to contribute to sustainable development in their affected communities and regions, the basic SIA methodologies explained here have to be considered as a starting point.