

A PERSPECTIVE ON COMMUNITY AND STATE INTERESTS IN SMALL-SCALE MINING IN THE INDIAN CONTEXT

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Abstract

To achieve eight per cent growth of the Indian economy, the industrial sector must grow at 10 per cent rate. The vision statements of various core sectors of the country show that the mining sector will have to expand greatly. India is among the top ten mineral producing nations in the world and the Indian mining industry indicates almost the full range of extractive mineral products. Small-scale mining is quite prevalent in India. Such mines constitute about 90 per cent of total number of mines, 42 per cent of the total non-fuel minerals and metals, 5 per cent of the fuel minerals. Some 3000 small-scale mines account for a work force of about 0.5 million people. Yet this sector is a neglected sector in Indian economy and still considered as an unorganized sector. This article examines the community and state interests in small-scale mining and the contribution of small-scale mines to employment, national mineral production, practices, and Indian policy on small-scale mining. It identifies drawbacks in the existing Government policy and discusses a possible role for the Government to upgrade the sector.

This paper highlights the impacts of mining on women community, the socioeconomic characteristics of women as miners and on the productive roles that women play in mining. It discusses how the pursuit of sustainable livelihoods, poverty alleviation, indigenous peoples right and gender equity in artisanal and small-scale mining be more effective when these communities are disadvantaged or neglected by Government policies. The respective roles of the indigenous people and migrant workers in the social organization of ASM sectors in different parts of the country, health and safety issues, environmental impact issues, which need to be addressed in ASM sector, are also discussed.

Introduction

The growth target of Indian economy during the tenth Five-year Plan has been fixed at 8 per cent per annum. This is a relatively higher growth rate of earlier ninth Plan of 6.1 per cent growth. It has been considered necessary for making a quick dent on the widespread poverty and unemployment in the country. To achieve 8 per cent growth of the economy, the industrial sector must grow at 10 per cent rate. The core sectors of the economy such as the hydrocarbon, steel, coal, electricity etc. require heavy investment and long term planning. The vision statements of various core sectors of the country show the increasing demand of minerals for meeting which the mining

sector of the country will have to expand greatly. The Indian mining industry indicates almost the full range of extractive and mineral products, including iron ore, coal, lignite, base and precious metals, building materials and gemstones. Operations range from small-scale mining through to some of the largest mining operations in the world. India is among the top ten mineral producing nations in the world, and its economy extent, depends upon the revenues accrued from minerals output (Ghose 1986)

In the post-independence period, growth in the mining sector has been mainly in small and medium mining units, barring some public sector mines (Rudra, 2002). Mining and quarrying enterprises of industrial minerals and construction material on a small-scale, i.e. producing relatively smaller quantities of mineral and employing relatively fewer persons, may be termed as small mines. The maximum production capacity of 50,000 tonnes per annum has been accepted as the criterion to define Indian small-scale mines (Ghose 2003a). It is recognized that small-scale mining can make a significant contribution to development, which has been one of the principal motives for a persistent interest in the sector (Noetstaller 1994). The socioeconomic significance of small-scale mining operations is often overlooked. As opposed to large-scale mining, requirements of small mines in terms of minimum reserves, implementation time, and initial investments are small; skills and infrastructure requirements are moderate; and employment per unit output is high (Argall 1978). While small minimum reserve requirements together with short construction period are an advantage in any economic environment, it is the combination of moderate capital and infrastructure requirements with the general use of labor that is of particular relevance in less developed economies (Ghose 2002). It is the specific pattern of the factors of production that makes small-scale mining an attractive option for developing countries like India.

Women in Indian mining are indeed a nontraditional activity, and consequently there is a tendency to conceal the fact that women constitute an important segment of the work force. The socioeconomic characteristics of women as miners and the productive roles that these women play in mining tend to be overlooked. Mining is commonly seen as a 'masculine' industries and it is commonly believed that Indian women play an insignificant role in it. In view of recent economic changes in industries, there is a need to review women's involvement in the industry and re-valuation of the prospects of women miners and their work in the mines need to be examined. The objective of this article is to examine the community and state interests in small-scale mining, to identify further initiatives and opportunities for socioeconomic development, and to evaluate the potential contribution of the sector to employment, national mineral production, practices, and Indian policy on small-scale mining.

Women miners in India

Women are involved in mining in three different ways – those who are working in the extractive process, those who are involved as workers in sorting and crushing of the preparation of minerals, and those who are working as clerks, peon's secretaries, nurses etc. However, it is crucial to examine women as miners in the context of these women workers. . It is an area where women are usually disadvantage in mining as the contextual framework, which allows overtime and place in a very heterogeneous field (Chakrabarty 1989). Whereas it is true that women miners are indeed hidden

from history and any attempt is made to recover the needs to conceptualize them within the problematic of mining history. In many instances the low profile of women miners takes on a particular quality due to contrasting high public profile of male miners.

The early mines were generally small. They were also generally family worked operations. It was in the context that most women became miners. In many instances the family work unit divided between mining and agriculture. Even in this context mining is considered to be dirty and dirty physical labor for all concerned. What is true, however, is that industrialization of mining operations changed the nature of women's work and ultimately and forces them out of directly being miners. During the 19th century in the gold mines of Mysore in India, women used to work in underground mines. But in most of the mines this practice was being phased out. Even today in many countries, there is a reluctance to allow women to work in underground mines and they are not even allowed as visitors. In Japan, women worked alongside men underground from the 1890s to 1928. They were then barred from working in mines belonging to major companies, but not in medium or small sized mines. In 1930 there were still over 44,000 women mineworkers and this ban was completely imposed in 1946. Similarly in India, women worked in underground and opencast mines and during 1920 they accounted for 37 percent of the total workforce. Regulations to restrict female mine workers were drawn up in 1928. Like Japan, women were brought back to underground mines during World War II but they were totally prohibited after its independence.

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Impact of mining on women community

India has a predominantly agrarian population that is dependent on the land and forests for its sustenance and social, cultural and economic lively hood. Rural and tribal women are primarily responsible for nurturing the family, collecting the forest products, and agricultural and livestock management. These women have a very intimate and symbiotic relationship with the ecology, as they are untenably linked to the natural resources (Ghose 2004). Governments and societies must recognize this link when they are conceptualizing development objectives and projects. Women are frequently alienated from development paradigms and their close association with the ecology receives even less recognition. In India exploitation of land and natural resources has a long history involving abuse and plunder. Most mining and mineral operations are found in forests regions, which are also habitat for tribal (indigenous) communities

Gender based discrimination and exploitation including female infanticide, dowry deaths, unequal wages, high levels of female illiteracy and morbidity, cast-based discrimination and other social evils are wide spread in India. In India it has estimated that about 10 million people have been displaced due to mining projects. 75 per cent of people displaced have not yet been received any form of compensation or rehabilitation (Bhanumati 2002). In India, women have no legal rights over land or natural resources. The Land Acquisition Act is draconian obsolete, providing over-riding powers to the state to encroach onto people's land for any public purpose including mining. To this day, the country does not have any relief and rehabilitation policy as a constitutional safeguard for its people. Local communities are not consulted about the acquisition of their land for projects and women are especially marginalized in the negotiation process. They are the last people to be informed about land acquisitions and their options and objections are rarely taken into account during decision-making. Testimonies from women living in coal mining areas show that displacement and loss of land are the most serious problems affecting their lives and livelihood, economic and social status, and health and security all depend land and forests. Mining has resulted in total destruction of traditional forms of livelihood and women's roles within subsistence communities. Women displaced by mining lose the right to cultivate traditional crops and due to forest destruction, are unable to collect forest produce for sale or consumption. As a result they are forced into menial and marginalized forms of labor and maids, servants, construction laborious or prostitutes—positions that are highly unorganized and socially humiliating.

Abundant medicinal plants are lost due to forest destruction, leaving women without a natural health support system. Often they are too poor to purchase medical services and medicines. Furthermore as the mining companies does not pay for the miners' medical expenses, employed men spend a large proportion of their wages on medicine, falling into a vicious cycle of indebtedness that drags the whole family into bonded labor. Historically, men have been the only recipients of rehabilitation program that provide their cash or employment to communities affected by mining. As a result, women have become completely 'idle' in the economic sphere. Often, when men get employment, women are forced to manage agricultural activities on their own. Displaced tribal communities that are not provided with compensation or rehabilitation, migrate to the bordering states in search of land and forests. They cut down vast stretches of forest for survival and face the harassment of the Forestry Department.

Displaced women are mostly absorbed into the small private or unorganized sector of mining related activities, where women are the first to be retrained, have no work safety measures, are susceptible to serious health hazards, and are exposed to sexual exploitation. The large-scale mines, which are increasingly technology dependent, have no space for women's participation as they are illiterate, lack of technical skills and face cultural prejudice. Whilst large-scale mining has limited space for women's employment, the small-scale sector absorbs women as contract or bonded labor under highly exploitative conditions Women's wages are always less than that of men, safety standards are non existent, paid holidays are not allowed even during pregnancy or childbirth. Unemployed women living in mining communities eke out their livelihood by scavenging on the tailings and waste dumps, often illegally, and suffers from the constant harassment of the company guards, Mafia and the police. They are exposed

to the physical and sexual exploitation of the mine owners, contactors and miners. They are at the mercy of local traders when selling their ores. In addition, women work with toxic, hazardous substances and suffer from several occupational illness including respiratory and reproductive problems, silicosis, tuberculosis, leukemia, and arthritis.

Most women working in mines have to leave their children at home, unattended, for the entire day. If they manage to take their children to mine-site, they expose them to high level of dust and noise pollution. In addition, the children are at risk of falling into the mine pits while playing and are susceptible to accidents from mine blasting. The living conditions of women displaced by mining have serious negative impacts on women. Tribal women's loss of economic status and the increase in non-tribal population in mining communities has resulted in degrading social customs. Social evils like wife beating, alcoholism, indebtedness, physical and sexual harassment, polygamy and desertation have emerged in many places. Human rights violations on female miners or women affected by mining have increased and are actively encouraged by state and corporate powers.

The lives of the women living in the gold mines of Kolar, Karnataka, provide stark evidence of exhaustible 'sustainability' of mining. The government has declared the mine bankrupt and exhausted, and is currently engaged in a legal battle with the union to ensure closure. As the laid-off men remain idle, women are forced out of their homes to eke out a living for their families. Within a span of one year since closure, there have been at least 35 deaths in this town due to stress and trauma. The government and the company have deliberately washed their hands off any responsibility towards the future of miners except offering a small compensation payment. The land is unfit for any use other than mining, women and communities have left in despair.

Large multinational mining companies have only recently entered the industry and a community has not yet has experience dealing with such macro player. However, these companies have exhibited considerable influence when lobbying for changes in mining policies and legislation in the very short time since their entry into the market. The World Bank funded coalmine in Hazaribagh provides further evidence of mining based injustice and ecological destruction. In addition to having use of contaminated water due to coal washeries, women are often harassed and assaulted when collecting wood, working, or when visiting neighboring villages. The women are too afraid of the 'Coal Mafia' to give testimonies of these of such incidents in public hearing or meetings. Although the Inspection Panel of the World Bank has been approached regarding these grievances, women are yet to experience justice.

Contribution to employment and social perspective

The increasing importance of small-scale mines, particularly in India, has led to increased employment and economic activity. Because little is known of the extent of their activities and their, technical, and environmental implications, there is a need to obtain better information so that the promotion of small-scale mines can proceed in an effective manner. Information on employment, output, capital employed, revenue generated, safety and health is either inadequate or non-existent. In conjunction with their assistance to the sector, a case can be made for implementation by the

Government of a straightforward reporting scheme, which would provide the data, necessary for policy development and subsequent control of the sector, so that small-scale mines can make their best contribution to the economy and welfare of the country.

The employment effects of such activity are considerable, especially in tribal and rural areas. A total workforce of about 500,000 is involved in this activity in India. Despite of some drawbacks, small-scale mining has several benefits. These include the ability to operate in remote areas with little infrastructure, enabling the exploration of otherwise uneconomic resources, and a high degree of flexibility because of low overheads. Small-scale mining may also fit in well with the existing social structure, particularly if seasonal operations are required because of agricultural production in the same area. The ability of small-scale mines to generate employment, income, and entrepreneurial skills in the rural areas can act as restraint on urban migration. In addition, because they are generally locally owned, small-scale mines can provide a larger net gain to the community and to the national economy than do larger foreign owned mine. At the same time small-scale mining can be inefficient, poor working conditions, problems of safety and health and environmental degradation abound (Hickie and Wade 1998). Much small-scale mining activity is carried out illegally and is thus difficult to monitor and control. Because of widespread smuggling, there can be considerable losses to the miners themselves and to the government. In India more than 50 per cent of the total mining labor force can be engaged in small-scale mining. Thus, these operations, which make an essential contribution to economic growth, need to be integrated fully into their respective economics.

In India, some 3000 small-scale mines account for about 5 per cent of fuel mineral production (Ghose 2003b). It has been reported (Chakraborty 2002) that such mines constitute about 90 per cent of the total number of mines (about 8,700) and produce about 42 per cent of the value of total output of non-fuel minerals and minor minerals taken together (Anon 2001a;2001b). The increasing importance of small-scale mines, particularly in India, has led to increased employment and economic activity. Because little is known of the extent of their production and their technical, and environmental implications, there is a need to obtain better information so that the promotion of small-scale mines can proceed in an effective manner. Information on employment; output; capital investment; revenue generated; and safety and health aspects is either inadequate or non-existent. In terms of government assistance to the sector, a case can be made for implementation of a straightforward reporting scheme, which would provide the data necessary for policy development and subsequent control of the sector, so that small-scale mines can make their best contribution to the economy and welfare of the country.

Socioeconomic status of small-scale mining areas

Small-scale mining does contribute towards the improvement in the social environment around its locality, provided the sector is given some attention in the interest of the State and the workforce. With regard to industrial status, small-scale mining is still considered an unorganized sector, receiving a step motherly treatment from both local and central government. Located in far-flung areas, isolated, disadvantaged by lack of power and infrastructure small-scale mines have always been considered as small-time

investment and never have been considered as a continuous stream of income generation, both during and after mining. In sum, small-scale mining is unfortunately ill supervised, neglected and viewed merely as a quick moneymaking proposition before leapfrogging into a new locale.

It contributes to some extent towards development of rural areas. Small mining operations help to create improved infrastructural facilities, like approach roads energy and water supply in a low scale (Ghose and Kumar 1997). Small mining activities, being situated in economically backward areas, stimulate greater variety in income distribution and create new job positions (Ghose 2003c). Consequently, the social and economic standard of living of the people in place starts rising further. Apparent contribution to government is the taxes and royalties from operators. But a significant contribution is fulfilling the social planning, the objectives of rural income generation, infrastructural development and stoppage of migration of rural labor.

Practices in small-scale mining

As compared to underground mining, mechanization in Indian opencast workings, primarily because of more congenial environment, has less complexity in design, configuration and operation and ready availability of indigenous equipment in case of the latter (Rai 1994). In small mines, particularly those producing minerals of less value are not mechanized. Most of the operations are carried out manually by opencast method (Ghose 1990a). Generally, manual means are employed for both breaking and loading of the minerals. In case of very hard rocks, heating the rock and cooling with water subsequently forms cracks, and sometimes explosives are used. Shot holes are drilled either manually using crow bars or mechanically using compressed air operated jack hammers to form a block and chisels are used or to extract the block. The workings are extended downwards, generally without formation of any bench, and when the depth increases, many a times ropes are used to go down to the floor of the quarry or to work on the sides on very small ledges.

Small-scale mining practices are as diverse as the minerals produced. At the low end of the industry, informal micro-scale mining is the extraction of typically high value usually from alluvial liberalizations or outcrops conducted by individuals or families, using purely manual techniques. By contrast, traditional and advanced small-scale mining comprises formal, organized mining activities carried out by small enterprises with limited capacity. . Micro mining is essentially confined to surface occurrences of minerals. . Frequently, the pick, the shovel, and the pan are the only physical assets employed. Production and income are usually erratic and often marginal due to the resulting technical limitations (Ghose 1990b). Unlicensed and unrecorded conduct of business is the rule rather than exception.

Micro mining also has record of inadequate safety, poor social facilities, and environmental neglect. In some areas the activity can be traced by the incidence of malaria and other diseases. As a migrating form of mining it can contribute land degradation and deforestation. The adjacent traditional small-scale mining category represents the registered and licensed non-mechanized or semi-mechanized mines, operated on a regular schedule by organized society members or entrepreneurs with the use of hired labors. Principal constraints faced by this category include lack of professional skills and capital required for the mine planning, pre-production

development, and mechanization. As a result, operations are usually limited to the shallow parts of deposits mines and productivity is low.

Advanced small-scale mining encompasses the small mineral properties using sophisticated mining and processing techniques based on professional expertise and state-of-the-art engineering design. Mines of this category play an important role in the mining sector, particularly in the field of industrial and construction materials. Operations are frequently privately owned, highly competitive, superior to large mines in terms of financial performance. Market orientation and continuous research and innovation, together with enterprising spirit of the owners and engagement of skilled employees, are the key success factors. Members of this category provide the most valuable evidence of ways and means for successful small-scale mining. Necessarily, the classification of practices discussed is a simplification of realities and it is obvious that numerous mines exist in the transitional areas are between the categories. The number of mines using or on the way to introducing advanced mining techniques is growing steadily. While these operations are largely competitive without outside assistance, both micro-mining and traditional small-scale mining will require supportive policies and programs to improve working conditions and performance.

Indian policy on small-scale mining

The small-scale mining sector in India does not have an appropriate place in policy statements. India has, however, a very special place for small-scale industries, but no corresponding place for small-scale mining (Anon 2000). Also, small-scale mining is not considered an industry for examining any benefit from the long least meant for SSI. In a way, it is a neglected sector in the Indian economy. This apparent neglect has led to the sector being developed in a haphazard manner so far, without guidance and support. But during the last 10 years or so, the small-scale mining sector has also, to some extent, been caught up indirectly in the vortex of globalization of India's economy. The better organized small-scale mines, in the upper range of production, in order to survive in the emerging competitive market, have been investing more and trying to adopt some advanced technology, involving methods to increase productivity and improve quality (Ghose 2003d).

Although mineral wealth rests with the state government, the subject of regulation of mines and mineral development is covered by the constitution of India. By virtue of this, the Parliament has exclusive powers to make rules with respect to regulation of mines and mineral development, while rule-making powers in respect of minor minerals has been delegated to the state governments, under section 15 F of the mines and minerals regulation and development act of 1957. Thus, states have framed different rules under this provision. Mineral rights are granted in three ways: through leases, quarry licenses and permits.

The industrial policy resolutions of 1948 and 1956 recognized the important role of small-scale mining in the Indian economy. A significant aspect of this resolution was that it did not place any hindrance on the operation of small mines by privately owned enterprises, even for minerals envisaged under large-scale operations through the public sector. The problem of small-scale mining has since been taken into consideration in the recently declared national mineral policy. In paragraph 7.12 of the document, it is stated that small-scale mining with modest demand on capital

expenditure and short lead time provides employment opportunities for the local population. Efforts will be made to promote small-scale mining of small deposits in a scientific and efficient manner while safeguarding vital environmental and ecological imperatives. It further states that preference should be given to scheduled tribes for mineral concessions for small deposits in scheduled areas. As regards size of operation, paragraph 7.2 of the mineral policy emphasizes conservation and development of scientific methods and states that tenure, size, shape, disposition with reference to geological boundaries, and other conditions should be such as to favorably predispose the lease areas to systematic and complete extraction of minerals. The issue of environmental management is being adequately addressed (Ghose 1997; 2001).

For a major group of small mines, producing minor minerals like building stones and sands, special provision has been made in the Mineral Conservation and Development Rules (MCDR) to relax the statutory qualifications. The recently amended MCDR provides for systematic planning of this type of deposit through a mine plan, and leaves the implementation to those with lesser qualifications. In the mines act, mines which do not go below the superjacent ground, opencast workings not extending more than 6m below the ground and where explosives are not used, and mines that do not employ more than 20 persons day are not considered under the purview of the act (Anon 1991). While India's mineral policy clearly advocates leasing to local tribal people, it is an accepted fact that statutory provisions are generally phrased in complicated language, and require a good understanding of the implications of law on the part of the mine operator. Most of the members of scheduled tribes, for whose benefit the mineral policy has been designed, do not have the legal background required to be able to follow these provisions. All provisions of the mining law are not applicable in every case, depending on the location and extent of the deposit. Qualified mining and legal experts can prepare a systematic mining plan encompassing conservation, development, environment, and safety aspects. Local people, through representatives experienced in mining, can implement the annual action plan. Relaxation of legal provisions can be sought and granted by the statutory authority under the existing provisions of MCDR and MMR, but what is needed is a government agency to help local applicants get a lease through a single-window system. The government of Gujarat has taken steps in this direction through the Department of Industry after setting up an Industrial Extension Bureau.

The International Labor Organization (ILO 1990) in a triplicate meeting the question of small-scale mines was actively discussed by the participants from 22 countries, including India. The meeting concluded that good safety and health measures should not be neglected in this type of mines. To that end, public authorities should promote the training of mine inspectors with the task, among others, of providing the employers and workers concerned with information and advice in order that the regulations on working and living conditions in the mines may be best observed. Jobs that are created in small-scale mines should conform to national and international labor standards and be subject to inspection. Small-scale mines should be made to adhere to the relevant standards. Because they are invariably labor intensive, it is important that they should be included in statistical surveys and be subjected to on going monitoring. District the action Government of India has taken to develop small-scale mines and to

improve their profitability; price fluctuations and unstable markets have major causes of income and employment problems in the sector. The ILO is already involved in technical cooperation in India to improve safety and health of in mines. Training program for mine inspectors, operators, and rescue teams and mine owners are under way. In several cases the projects are oriented to small-scale mines. Experienced mine personnel are serving as Chief techniques advisers in the projects. In addition, the ILO has prepared and published several codes of practice that are relevant to the mining industry, including small-scale mines.

Thus it is obvious that irrespective of location, size and type of the mine, there is much scope of application of science and technology for techno-economic improvement of Indian small-scale mining sector to be more self-reliant, economically viable, and sustainable. There is a wrong notion that application of any technology is always a capital-intensive affair (Rathore et al 2000). On the contrary, a technology is said to be successful only when it suits to a given condition and yields positive economic result. In Indian socio-economic perspective it would be irrational to think of high-tech capital intensive small mining ventures like those in advanced countries, e.g. Ankele opencast dolomite mine in Finland, a highly mechanised mine with automation, produced 82,408 tonnes of mineral in 1989, with only two miners working for 3763 hours in the year (Matikainen and Pukkila 1990). But it would be irrational to plan such mines for Indian system.

Obviously, Indian small mines should basically be a labour-intensive industry, to make use of the huge manpower readily and economically available in the country. Moreover, deployment of larger manpower reduces the capital requirement of any project. In turn, it would promote the regional socio-economic development. At the same time, to optimise the economic benefit of any small-scale mining venture within its given limits of infrastructural facilities and resources, necessary operational support should be provided by appropriate technology. The word appropriate means set apart for a purpose; peculiar; suitable. By appropriate technology we do not identify any particular level of technology. It may be conventional, even primitive, or sophisticated and ultramodern. The only condition of any technology to be appropriate for any given system is its fitfulness to the system and purpose under condition.

While application of conventional and indigenous, but costly machineries may not be appropriate for many Indian small mines, use of sophisticated computer based mine design techniques may be safe, scientific and economic, thus appropriate as well, for planning of those mines by external mine design agencies. For overall improvement of Indian small-scale mining sector, it is very much essential to adopt this philosophy at all levels. It is evident that small-scale mining has much in common with industries such as construction and agriculture. Many of these processes are rather simple and direct, involving earthmoving, breaking and sorting of materials, drainage, water and power supply, and transportation of bulk materials over short distances. So far as gaps in equipment availability are concerned larger and more sophisticated units have presently replaced much of the rather simple equipment, which was used in the past. But, slightly upgraded versions of this early equipment can be of much use in small-scale mining sector even today.

Conclusion

India will be required to strive to attain increased production of minerals. Small-scale mining provides a wealth of socio-economic benefits to rural inhabitants, generates employment, income, fits in well with existing infrastructure, and can to restrain migration to urban areas. It also makes a significant contribution to development objectives; however there is no nationally accepted criterion for this. Nevertheless, the sector is still considered an unorganized sector and it does not figure prominently in Government policy statements. The socioeconomic significance of small-scale mining operations is often overlooked, and there is a need to protect its economic and social benefits for development. This paper acknowledges the widespread negative impacts of mining on women to participate in the community programs created by the mining companies. However, for women from the communities in India, a few bags of seeds, a few packets of medicine, a training program on micro-credit or an awareness program on health, are no compensation for what they have lost due to mining or what future mining has to offer to them.

In order to be prosperous and safe, small-scale mining needs to be raised from its condition as an unorganized unsupervised industry to one that is modernized, monitored, organized, and supported so that specific goals can be set and met. In recognition of the need for state support for small-scale mining, government is implementing programs to foster it. These are also making small-scale mining more attractive to private sector involvement. Reasons for promoting small-scale mines include: the creation job opportunities in rural areas for unskilled labor in mining; diversity is dependence or imports of basic commodities successful artisanal mining will also encourage locals to participate more fully in private sector activities. Making small-scale mines, thereby making them better recognized and accountable for their labor practices and safety conditions will help to secure improvements in the lives of rural people.

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