Small-scale gold mining: Examples from Bolivia, Philippines & Zimbabwe

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Introduction

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The three case studies in this working paper were commissioned as part of the preparatory work for a tripartite meeting on Social and labour issues in small-scale mines, held in Geneva on 17-21 May 1999. Some of the information in them was included in the report that was prepared for the meeting. The three small-scale gold mines described here, in Bolivia, the Philippines and Zimbabwe, are each typical of small-scale gold mining in their region. There are both similarities and differences in the way mining and processing is carried out and in the issues that each faces and how they are being dealt with.

Like most economic activities, small-scale mining has positive and negative aspects. It is closely linked to economic development, particularly in the rural sector in many developing countries; it helps to stem rural-urban migration, maintaining the link between people and the land; it makes a major contribution to foreign exchange earnings; it enables the exploitation of what otherwise might be uneconomic resources; and it has been a precursor to large-scale mining. Moreover, it provides employment to about 13 million people and affects the livelihood of 80-100 million.

On the other hand, the potential of small-scale mining is far from fully realized because of the many inadequacies of the process itself and of the regulations and practices that attempt to control it. Much of the potential benefit is lost due to the lack of a legal and fiscal framework, and because of inefficient production, processing and marketing arrangements. Uncontrolled small-scale mining can have a major adverse impact on the environment, and work in small-scale mines is often dangerous, unhealthy, precarious and poorly paid. These factors tend to reinforce one another creating a vicious circle which it is only possible to break out of by having in place the policies that will put small-scale mining on a stable footing and, most importantly, the programmes, the will and the resources to implement them. The social and economic complexity of small-scale mining and the fact there is no model on which to develop a sound theory or programme and an ad hoc approach to assisting it mean that change has been small and slow.

Irrespective of legal definitions of small-scale mining and requirements for its registration that often merely serve to satisfy bureaucratic requirements, the situations on (and in) the ground are varied and complex. The failure of much of the existing legislation and institutional arrangements to differentiate between and accommodate the different types of small-scale mining has been a major factor in preventing the effective delivery of assistance to small-scale mining, leading to its continued isolation and marginalization in many countries.

Small-scale mining can and should be encouraged by creating the operating environment that encourages the use of best practices for mining and for occupational health and safety and environmental protection. Together with institutional arrangements that provide for the effective implementation of regulations by strong, informed government institutions, this will enable small-scale mining to thrive.

The task for the new millennium is to bring small-scale mining into the mainstream. The steps that need to be taken in this regard include ensuring title and property rights over minerals are straightforward to acquire and transfer; that access to finance for small-scale mining is on equal terms with other sectors; that labour and social issues are addressed and the working and living conditions of small-scale miners and their communities are
improved; that the environmental impact of small-scale mining is minimized; and that small-scale miners have
the necessary technical and business skills to ensure the safe and efficient operation of their mines. Success will
assure to existence of small-scale mining as a socially and economically beneficial activity that enriches the
entrepreneurs and workers involved, together with the regions and the countries in which it takes place. Some of
the issues these studies address -- health and safety, legislation, links with large mines, and the coordination of
assistance -- are crucial elements in the matrix that affects the development of successful small-scale mining
operations.

Health and safety in small-scale mining

Health and safety are important issues for small-scale miners and their communities. If real progress is to be
made in dealing with accidents and diseases affecting small-scale miners, a factor will be to ensure that
sufficient reliable data are available so that analysis will point quickly to the most appropriate courses of action
for surveillance and treatment. For this to be possible, two things are important -- a simple form for reporting
accidents and disease and the removal of any stigma that is attached to their reporting. Occupational health and
safety regulations may need to be revised to ensure that the special requirements of small-scale mines are
covered. Also, mines inspectorates will need to be strengthened if they are to oversee occupational health and
safety and provide the extension services that will be essential if small-scale miners are to be convinced that
they can be more open about occupational health and safety to their ultimate advantage. Moreover, safety
training must be carefully tailored to accord with the linguistic, ethnic and cultural characteristics of the
workforce, as well as with the industrial realities of the country or region.

If a mine owner/concession holder can be convinced that supporting training to improve occupational safety and
health is in his best interest, the chances of an effective programme being achieved are enhanced. Fortunately,
there are several examples of the self-interest of small-scale miners being used to good effect to improve
occupational health and safety. The discussion and duplication of successful projects can provide a fast track to
improvements.

In view of the individual and competitive nature of much small-scale mining, the long hours, and arduous work,
there seems to be little chance of setting up safety committees and designating "safety resource specialists" from
among the workforce -- a typical approach in large-scale mines. The impetus is likely to have to be external --
from government, a large mine nearby, mining trade unions, NGOs or IGOs -- and involve all at each site and,
preferably, the local community.

Improving occupational safety and health requires resources. Clearly, the cost of diseases that are associated
with small-scale miners and their communities is significant. It is short-sighted to look solely at the cash
benefits arising from small-scale mining that, hopefully, flow into the coffers of government and local
merchants without addressing the social costs that they entail. Some means needs to be found to capture and
plough back into public services, such as improving health and safety, a part of the revenues from small-scale
mining. Whether this is achieved by earmarking a portion of the margin on sales retained by buying agencies,
by increased licence fees, or some other means will depend on national circumstances.

Education, training, demonstration and surveillance are the key elements of any programme to improve health
and safety in small-scale mining. But this is well-known. What is required are the will and resources to
undertake a sustained programme that will provide sufficient incentive for those concerned to want it to
continue. attempting to improve health and safety without appealing to the self-interest of those most directly
involved is likely to prove fruitless. For this they must be fully involved from the start, and have a sense of
being full partners. In other words, the fundamental question "What's in it for me?" must be clearly addressed
and a credible answer provided.

Legislation for small-scale mining
The isolation of much small-scale mining from the mainstream of economic development -- the poverty aspect - leads to its legal isolation too, preventing it from becoming a recognized economic activity with wide benefits to the people concerned, their region and the country as a whole. The high proportion of national mineral production coming from small-scale mines in many countries and the extent of illegal mining in some countries, particularly of precious minerals, provide conclusive evidence of the extent of economic loss that is being endured while they remain illegal.

The legalization of small-scale mining is an important step in transforming it into a sustainable activity. The simple awarding of titles and licences and making them transferable, renewable and long-lasting are the bedrock of viable legal small-scale mining activity.

Small-scale mining is bedevilled with too many regulations that are mostly designed to constrain it and too few inspectors to ensure that they do. There is therefore little incentive for small-scale mines to conform, particularly if the risks of being caught and sanctions applied are minimal. If small-scale mining is to be encouraged to operate legally, legislation must be (at least) even-handed in allowing small-scale miners access to suitable land for prospecting and mining activities. It must be "user friendly" as far as the issuing of permits and the granting of licences are concerned -- permits that provide clear security of tenure for a reasonable period so that small-scale mining can become established. Conflicting regulations need to be harmonized and needlessly restrictive provisions reviewed. If a single agency were responsible for overseeing small-scale mining and the miners themselves could do business at a "one-stop shop" the benefits of legal operation and protection under the law would start to outweigh the costs as far as small-scale miners are concerned.

The development of small-scale mining regulations and development assistance projects to strengthen mining inspectorates are slowly having an impact. But unless more is done quickly, mines inspectorates run the risk of continually being a few steps behind in bringing small-scale mining under the umbrella of the law.

**Links between large and small-scale mines**

There is often a clash of interest between small-scale and large mines. In the eyes of many large mines, small-scale mining is synonymous with illegal mining. Small-scale miners often accuse large mining companies of tying up large tracts of land with speculative mineral rights, denying them their rightful access to mineral resources.

There are many cultural, procedural and political challenges to companies opening their doors to small-scale mining. These include: avoiding an influx of small-scale miners and people looking for work in the large mine who might turn to small-scale mining; ensuring that sufficient resources exist to enable small-scale mining to continue for an agreed period (possibly for the life of the large mine); and to get government agencies to accept and meet their responsibilities towards the community.

While private companies are not expected to support informal sector activities, they generally have a role in communities in developing countries that goes beyond that of employer. Assisting small-scale mining could be a valuable part of this activity. Moreover, governments will find it difficult to tackle the problems of small-scale mining, including labour and social issues, without the technical, logistical and financial support of the mining industry. As far as the industry is concerned, however, it might well say that the taxes and royalties it pays are sufficient for the government to meet its obligations to small-scale mining and that it should act accordingly.

The continuing presence of unorganized, uncontrolled small-scale mining is considered by most mining companies to be a threat to the establishment of new large mining operations. Tension and conflict between alienated and displaced small-scale miners and large mining companies can be politically and financially damaging for foreign investors and national governments, particularly if it discourages new mining activity. There have been several violent clashes in different countries as small-scale miners have sought to re-enter what they considered to be their rightful mining territory which had been assigned by the government to a large mining company. The potential for conflict over access to mineral resources is likely to increase as mining
companies seek new prospective areas in developing countries and, understandably, focus first on sites in the vicinity of existing successful small-scale mining activity. Displacing thousands of miners and their families and starting a new mine employing a few hundred local workers might be good for the budget, but the government and the company ignore those displaced at their peril.

Where large mining companies consider themselves as "guests" in the region where they establish new operations, behave accordingly and work within the existing cultural environment, the chances of harmonious relations between large and small mining operations are much greater than if the large mine is a heavily guarded enclave. But many small-scale miners are not interested in being "stifled" by an overbearing presence of a large mine "helping them out". So care is needed in establishing and maintaining the right kind of relationship between them. Close collaboration between large and small mines will be good for mining, good for the company concerned and good for small-scale miners.

**Coordinating assistance to small-scale mining**

An ad hoc approach to small-scale mining has constrained efforts to: promote better organization and work practices; increase the productivity of small-scale mines; and lessen the adverse labour and social effects. Erratic policy and decision-making has led to confusion among administrators and managers of both large and small and has sometimes caused conflict at mining locations -- between large and small mines and between small-scale miners and regulators. A lack of coordination in the provision of external assistance has not helped. No wonder that bringing order to small-scale mining is a problem.

Even when small-scale mining can operate by itself -- which it does for most of the time -- such operations might not be for the best for all concerned. Appropriate, integrated external influence or involvement can help small-scale mining realize its full potential -- for the mine and its owners and workers, for the environment and for government coffers. Such involvement needs to be carefully developed and implemented -- in consultation with all concerned.

Many projects to assist small-scale mining have failed or have not led to lasting improvements because they have treated small-scale mining as a sub-set of large, formal mining. Most of the emphasis has been on finding technical solutions to mining and processing problems, with scant heed being paid to the underlying economic, labour and social issues. Another factor in their relatively short-lived success has been the low priority given by a number of governments to this sector. So once a project has been left to stand on its own, it has often gently wound down due to a lack of continued government support or supervision. Fortunately, the relatively recent realization that much small-scale mining is closely related to poverty has led to a reorientation of assistance programmes to ensure that the underlying aspects are included when assistance is provided, giving a greater chance of sustained improvements being achieved. Nonetheless, there are clearly some gaps to be filled as far as providing assistance to small-scale mining is concerned. Better coordination and consultation at all levels will undoubtedly pay dividends in delivering assistance that is wanted, where it is needed, in an efficient and effective way.

These three studies, that were carried out by people with long and varied experience in many aspects of small-scale mining, provide useful examples of the approaches that have been taken, and should be taken, to enhance both the image and performance of small-scale gold mining in particular and small-scale mining in general.