

Strategies for sustainable development of the small-scale gold and diamond mining industry of Ghana

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Abstract

The small-scale gold and diamonds mining industry is of great importance to Ghana. Since its regularization in 1989 the sector has produced and sold over 1.5 million troy ounces of gold and 8.0 million carats of diamonds. During the same period the sector also provided direct employment to over 100,000 people and improved the socioeconomic life of many individuals and communities. However, these were largely achieved at a cost to the environment in areas where mining is carried out and there is the need to develop the industry in a sustainable manner. This paper looks at the developments in the small-scale gold and diamonds mining industry in Ghana and proposes some strategies on how the concepts of sustainable development could be applied to the industry.

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Introduction

For many centuries the small-scale mining of precious minerals has made a significant impact on the socio-economic lives of people and communities involved directly or indirectly in the sector (Kesse, 1985; Hilson, 2002a). In Ghana, the precious minerals mined at the small-scale level are gold and diamonds. Since the regularization of small-scale mining in 1989, over 1.5 million troy ounces of gold and 8.0 million carats of diamonds have been produced by the sector (Ghana Minerals Commission, 2004).

Due to its labor intensity, small-scale mining operations generally generate significant employment avenues, especially in remote rural areas where alternative job opportunities are scarce and low paying. Apart from the direct employment contributions of small-scale mining, it also generates a substantial number of indirect jobs in other sectors of the economy. However, production of these

minerals has been at a cost to the environment and there is the need to develop the sector in a sustainable manner.

Sustainable development of minerals and other natural resources has been endorsed as a global management and development strategy and environmental, economic and social developments have been highlighted as the three pillars of sustainable development and their integration is encouraged (WCED, 1987; Anon, 1992). There are, however, several arguments about the applicability of these concepts in the minerals industry, especially the small-scale minerals industry, since minerals are non-renewable resources that are subject to exhaustion in the course of production. The exhaustible nature of mineral resources places a limit on growth of these industries and hence their sustainability (Lele, 1991; Mikesell, 1994; Traore, 1997; Ednie, 2002; Anon, 2002).

In Ghana, there is an ongoing discussion by stakeholders in the mining industry on measures to mitigate the negative effects of small-scale gold and diamond mining and to help the industry to develop in a sustainable manner (Yakubu, 2002; Hilson, 2002b). This paper is a contribution to the debate. It focuses on how the general concepts of sustainable development can be applied specifically to the small-scale

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gold and diamonds mining industry in Ghana. Sustaining the sector is considered in the context of the mineral supply process, environmental and health implications, and the socioeconomic realities of the affected areas.

Legal framework of small-scale mining

The legal framework for registration of small-scale gold and diamond mines, mineral production and sales in the sector was established in Ghana in 1989. The Small-scale mining law, PNDCL 218 (Anon, 1989a) led to the establishment of the Small-scale Mining Project within the Ghana Minerals Commission. The Small-scale Mining Project (now Small-scale Mining Department) has the responsibility of providing technical assistance to prospective and registered small-scale miners in Ghana and promoting their activities. The Mercury Law, PNDCL 217 (Anon, 1989b) legalized the purchasing of mercury for gold recovery purposes from authorized dealers and the Precious Minerals Marketing Corporation (PMMC) Law, PNDCL 219 (Anon, 1989c), created an authority to buy and sell gold and diamonds.

The PMMC operates gold and diamond purchasing offices in Accra, Tarkwa and Bolgatanga and has licensed buying agents and sub-agents throughout mining areas in the country who buy gold and diamonds for resale to the corporation. In order to introduce some form of competition into the gold purchasing set up, the Government of Ghana granted buying licenses to private owned companies namely, Miramex and Precious Metal Refinery Limited to purchase gold from small-scale miners.

Since the regularization exercise, two types of small-scale miners have emerged—legal and illegal. Legal small-scale miners comprise those who have acquired mining licenses from the Minerals Commission of Ghana to cover their concessions. Illegal small-scale miners include those mining and/or processing ores without the requisite mining license and they usually operate on concessions held by other companies. Illegal small-scale gold or diamond mining is popularly known in local parlance as *galamsey*, a corruption of the phrase ‘gather them (the gold) and sell’.

By the end of 2001, 420 small-scale mining concessions had been licensed in the country. Of these, nine were diamond licenses and 411 were gold. Together these mines generated employment for over 100,000 miners (Ghana Minerals Commission, 2002). Some small-scale diamond miners recover gold as a by-product or vice-versa

Technical and financial supports for the sector

The small-scale mining sector has received governmental and international support since its regularization. The Minerals Commission of Ghana, a governmental body, which is responsible for formulating and managing

the sustainable exploration and exploitation of mineral resources in the country and for handling all public agreements relating to mining, is also responsible for making policies governing small-scale mining activities. The Commission manages the sector through its Small-scale Mining Department. The sector has also received assistance from the World Bank for the implementation of the legislation and provision of technical support in areas of health, safety and environment. The German non-profit organization, Gesellschaft für Technische Zusammenarbeit (GTZ) with support from the German government also assisted in setting up a hire-purchase scheme of equipment in 1992 for the sector (Mireku-Gyimah et al., 1996). With assistance from Federal Institute for Geosciences and Natural Resources of Germany and the World Bank, the Minerals Commission successfully tested and introduced hammer mills to the Ghanaian small-scale mining industry in 1999. The first plant was built at Bolgatanga in the Upper-East Region of Ghana (Anim-Sackey, 2001).

A number of companies have been registered as mining support service companies in the sector and these include Peace Small-scale Mining Services, West Africa Gold Mining Company Limited, China Non-Ferrous Metals (Ghana) Limited, Elpusan Company Limited and Triumph Day Company Limited (Anim-Sackey, 2001). They provide technical assistance in prospecting (after acquisition of small-scale mining licence), contract mining and minerals processing. They also give financial and managerial support to companies and groups engaged in the trade. The registration of mining support service companies has contributed significantly to the Minerals Commission's objective to mechanise the mining and processing operations in the small-scale mining sector. Some large-scale mining companies, that have allowed small-scale miners to work as tributers on their concessions, support the miners through training programmes and provision of equipment. Notable among these companies is Abosso Goldfields Limited, which began this management strategy when it was a subsidiary of Rangers of Australia.

Small-scale miners in Ghana derive most of their technical support base from the staff of the Small-scale Mining Department of the Minerals Commission in the district centers. The district staff visits the miners frequently on their concessions and offer technical advice on good mining practices, health, safety and environmental issues.

Small-scale mining activities

The favorable geological setting of Ghana allows small-scale mining of gold and diamonds to thrive. Several small-scale mining areas are dotted throughout the country, specifically within the Tarkwaian and Birimian rock systems of Ghana. Fig. 1 is map of Ghana showing the diamondiferous and gold bearing areas where small-scale activities thrive (Kesse, 1985).

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