Small-scale mining activity in Mengwe Community, Northern Ghana: Advantages amidst the disadvantaged socio-economic effects

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Small-scale mining has been an issue for discussion for some time now in Ghana as a result of its disadvantaged socio-economic and environmental implications amidst the advantages of the activity. To achieve the aim of this study, both primary and secondary data were used for the study. Key informant interviews, focus group discussion and direct observation were used to triangulate secondary data sources. Despite the advantages of employment creation and positive livelihood change, the presence of small-scale gold mining in the study area has resulted to change in community lifestyle with serious consequences on academic performance and low agricultural output resulting in increased food prices. Malaria and Acute Respiratory Infections (ARI) are the two major diseases which are prevalent in the community and which are attributed indirectly to the small-scale mining in the study area. The absence of a District Support Centre in the Funsi District where the Mengwe Community is located leaves the miners without registration and technical assistance, hence the disadvantages resulting from the activity. The identified disadvantages of small-scale mining inform stakeholders to employ measures in maximizing advantages accrued from the activity whilst reducing the disadvantages of the resulting activity in the study area.

Key words: Small-scale mining, advantages, amidst, disadvantages, socio-economic effects, Mengwe Community.

INTRODUCTION

Small-scale mining is a critical livelihood activity, employing more than 13 million workers and sustaining 80 to 100 million people worldwide (Heemskerk, 2002). The activity, despite its recent recognition as a potential source of income generation for the poor, is known to be a leading cause of acculturation and environmental degradation in many developing countries (Barry, 1996; United Nations, 1996). Small-scale mining is a term used to describe all formal and informal, manual and mechanized mining activities that adopt unscientific and/or primitive technologies to extract minerals, usually gold, from either secondary or primary ore bodies (Heemskerk, 2002). Small-scale mining is essentially a small industrial form of raw material extraction usually carried out in most developing countries with Ghana not an exception (Hilson, 2001). More recently, there are about 300 registered small-scale mining groups that constitute a major source of employment especially for small-scale gold and diamond miners, and contribute some foreign exchange to Ghana’s economy (Akabzaa and Darimani, 2001; Hilson, 2002). Other groups or individuals that are not registered, cannot access any form of support to boost their mining business. Apart from gold and diamonds, other small-scale activities serve for employment for a lot of people and centres on the extraction of salt, kaolin, silica, sand, brown clay, aggregates and crushed rocks, etc (Agyemang, 2010).

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There are several challenges faced by small-scale miners on the physical as well as the social and cultural environment. These also pose a great danger to the environment. The activities of the miners pollute rivers and streams nearby that serve as a source of drinking water for communities downstream (Lombe, 2003). The ‘crude’ technologies used also pose a danger to the miners themselves who are constantly killed due to poor occupational-safety standards (Hilson, 2001). Aside the environmental and occupational hazards, these businesses are not registered and hence, do not benefit from any form of training to improve their business practices (Hentschel, 2002). The non-registration of their businesses also means government loses the requisite taxes for development. Small-scale mining is often poverty driven and located in rural areas (Hilson, 2002). Small-scale miners are generally unskilled and earn little (Hentschel, 2002). Individuals may be involved in a number of different types of mining activity: gold or diamond rush; this is characterized by unstable communities, which are often saddled with environmental degradation from crude methods used.

In Ghana, the Birim and Densu Rivers in the Eastern Region are examples of rivers that serve as a source of drinking water for several communities but have been gravely affected by small-scale mining activities (Amankwaah and Anim, 2003). According to Hilson (2001), most small-scale miners in Ghana are engaged in the extraction of gold and diamond simply because they generate wealth quickly. He added that small-scale mining brings several benefits to developing countries, manifested mainly as employment and revenue. It should be noted that through small-scale mining, a lot of environmental liabilities still provides lots of socio-economic benefits to the people of Ghana. These include foreign exchange earnings, employment for citizens, revenue for the government and infrastructural development. The purpose of this article is to examine the advantages amidst disadvantages of small-scale mining in Mengwe Community in the Upper West Region of Ghana and to propose ways for maximizing the advantages of the small-scale mining activity, whilst at the same time reducing the negative effects of small-scale mining activity in the study communities.

The study area

Mengwe, the study area, is located in the Wa East District of the Upper West Region of Ghana. The community is located in the south-eastern part of the region. The district capital which is Funi is 115 km away from Wa, the regional capital and has a land mass of about 1078 km². It lies between latitude 9°55’S and 10°25’S and longitude 1°10’W and 2°5’W (Wa East District Assembly, 2009). The community has experienced an increase in population of 2081 in the year 2000 to 2136 in 2010 (GSS, 2010) with majority of them into small-scale mining.

MATERIALS AND METHODS

This research was conducted in northern Ghana and specifically Mengwe Community of Upper West Region of Ghana to study the advantages amidst disadvantages of small-scale mining. As an ethnographic research, the following questions were of relevance to the researchers:

(a) What motivated the miners to go into mining?
(b) What are the advantages of small-scale mining to the socio-economic development of the study area?
(c) What are the disadvantages of small-scale mining on the socio-economic development of the study area?
(d) What should be done to reduce the observed disadvantages of the mining activity?

Qualitative research method was more appropriate to answering these research questions because it afforded the researchers time to observe and record participants’ opinions on the researchers posed to them. In this regard, data were obtained from primary and secondary sources. Primary sources of data were generated through interviews, observation, focus group discussions and questionnaires, and were then triangulated with secondary data sources generated from the Environmental Protection Agency, Wa and the Mineral and Mining Commission, Wa. Obtaining the primary data for analysis was preceded by selection of the sample size. The population universe of the study area has an estimated population of around 2150 (GSS, 2010) making it impossible to involve the entire population in the study area. As such, it became sensible to sample a number of individuals and groups of people such that their views, opinions and perceptions would represent the larger population group from which they were selected. To achieve this, purposive sampling technique (Cameron, 2000) was used based on participants’ local ecological knowledge, knowledge on environmental degradation and assessment related issues and small-scale mining. Selection was done through the initial consultation with the Assemblymen and community leader. Selected participants were, later on, contacted and the purpose, dates, times and locations for the interviews and discussions were discussed and scheduled respectively. Almost all the key informants and some of the focus groups received the interview guidelines some few days prior to the original scheduled time with the aim of giving them enough time to prepare themselves adequately for interviews and discussions. Interviews and discussions guidelines focused on individual perceptions on the advantages and disadvantages of small-scale mining in the study area. The interview and discussion protocols ensured that the same questions were given to all
participants and also provided flexibility to the participants to allow the emergence of new issues of relevance.

**Key informants' interviews**

A purposive sampling technique was used for the selection of key informants after following all the necessary protocol. To ensure a broad based data collection, a carefully designed, open-ended questionnaire was administered to key informants knowledgeable in small-scale mining in the study area. All key informant interviews were done on a one-to-one basis to ensure confidentiality and protection of the informant. All interviews were recorded to tape, except for the cases where the interviewee did not feel comfortable with tape recording. In such circumstances, the interviews were recorded by taking extensive notes, and then detailed interview summary was compiled for each interview.

**Focus group discussion**

Focus group discussions were tailored for each target group to ensure that discussions were both relevant to the research topic and the activities of the target groups. These discussions produced data and insights that could not have been obtained in one-to-one interactions. The rationale of using focus group participants was to solicit broad-based information from participants chosen from socio-cultural backgrounds with concern and adequate knowledge about small-scale mining in the study area. Like the key informants, participants were sometimes allowed to go outside of the scope of the topics under discussion but only what was required was noted for further analysis. This was done to boost their confidence and enthusiasm in the research. Where clarification on aspects was needed, they were carefully asked for this. An atmosphere was created for easy flow and sharing of ideas but care was always taken to control the flow of responses and the most eloquent ones among the focus group were duly monitored. For the purpose of soliciting more information on mining activities in the area, small-scale miners’ focus groups were included in the focus group discussions. For safety and the fact that small-scale surface mining is illegal and difficult to assemble miners for discussions, it became necessary to get in touch with their leaders who later convinced others to join in the discussion.

**Big net approach**

Adopting the “big net approach” (Fetterman, 1989), the researchers through participation intermingled with a lot of participants in the study community to get the overall sense of the activity of small-scale mining activity with special reference to the advantages amidst disadvantages.

**Direct observation**

Direct observation involves a researcher or social worker living and working in a community for the purpose of soliciting directly information regarding his research (Cook, 1997). It involves a researcher understanding the day to day affairs of a community under investigation, with the aim of obtaining further information to substantiate what has already been acquired through other means of participatory research (Jones, 1985; Marshall and Rossman, 1989). In support of the assertion made by Cook (1997) and Jones (1985), Eyles and Smith (1988) observed that getting oneself embedded in community daily activities, allows a researcher to gain detailed inside knowledge of the community under investigation that would have been made difficult through other participatory research techniques. Direct observation thus goes beyond the formal interactions with community members as common with structured and semi-structured interviews, household interviews and focus group discussions, to total involvement of the researcher in the real community life situation. It is upon this basis that direct observation is chosen as part of the techniques for the build-up of the assessment methodology for environmental degradation.

**RESULTS AND DISCUSSION**

**Socio-economic advantages of small-scale mining in the Mengwe Community**

As indicated in the literature review, the mining industry and for that matter small-scale mining, is a major employer of many people and in many cases the indigenous people in mining communities. Research participants admitted most youths in the study community are found working in the mines with some of their household members. Also, some miners and other community members who have become miners admitted employing both family and non-family members at the mining sites. Some members in the community also acknowledged that members of their household were involved in small-scale mining activities. Indirectly, people were observed selling goods and services such as food vending, sales of water, sales of drinks and sales of vehicle parts. Others were also involved in motor repairs, tailoring and dressmaking and grinding mill operation. As per these observations and responses, it is pertinent to state that the contribution of small-scale mining to employment in the community reflect the views of Amankwaah and Anim (2003) and Hayes (2008), who posit that small-scale mining provides direct employment at every stage of processing and as well as indirect and non-mining related jobs. Findings from the research participants indicate three main sources of income generation to individuals and institutions. These came in the form of personal income, royalties paid to landowners.
and traditional leaders and levies paid to the district assembly. It was realized that individuals who were engaged directly and indirectly in small-scale mining activities derived a substantive amount of personal income. According to Philips (2006), the earnings from small-scale mining exceed other income earnings sources such as farming. As a result, the researchers sought to find out whether or not small-scale miners earn more income than the income generated from agriculture and other non-mining related activities in the three mining communities. Majority of the miners interviewed indicated to have engaged in farming before getting involved in small-scale mining. Therefore their previous earnings from farming was examined and contrasted with current earning from the sale of gold from their mining activities. Most of them acknowledged that earnings from small-scale mining were higher than other non-mining related activities. Another major contribution of small-scale mining is that it has reduced the north south migration among some community members especially during the dry season as commented by most of the research participants. Focus group participants admitted that most of the youth are seasonal workers at the mining site. According to them, such seasonal employment had helped to reduce the usual migration of members of their households to the south to undertake menial jobs during the dry season. Other benefits acknowledged by respondents to have driven from small-scale mining were the construction of houses, purchase of motor bikes and payment of school fees. Interaction with some workers at the mines revealed that a number of them were students from second and third cycle institutions from the surrounding communities or other parts of the district. These students had come to work and obtain some income to help fund their education (Figure 1).

Socio-economic disadvantages of small-scale mining in the Mengwe Community

Despite the advantages of small-scale mining discussed in the foregoing, some research respondents were quick to acknowledge some socio-economic problems associated with the mining activity. Most of the research participants indicated that there were socio-economic costs or problems associated with small-scale mining in the study area. Participants acknowledged school dropout as a social cost of mining, crime rate such as stealing, sexual abuse, and drug abuse. They also acknowledged the loss or reduction in agricultural activities most especially farming while other focus group participants’ respondents specified other problems such as child labor, broken homes, and the increase in sexually transmitted diseases among others (Figure 2).

Comparing the socio-economic advantages to the disadvantages

In order to ascertain whether advantages from mining outweighs the disadvantages of mining in the study community, participants were asked to compare the socioeconomic advantages and disadvantages of
small-scale mining. Almost half of the respondents acknowledged that the cost of small-scale mining outweighed the benefits of small-scale mining in contrast to others who acknowledged otherwise. Considering the socioeconomic cost and benefits analyzed in the study community, alongside the high rate of land degradation and health effects resulting from the activity in the study community, it is prudent to argue that the social cost of small-scale mining in the community outweighs the benefits. This study, thus strongly agrees with the study of Schueler et al. (2011) that the disadvantages of mining exceed its advantages (Figure 3).
Strategies to maximize the advantages amidst the disadvantages

The findings of this study revealed that there are no localized strategies with the exception of national strategies adopted by the Environmental Protection Agency, the Minerals Commission and the District Assembly. However, it was revealed that three main strategies were adopted namely: land reclamation, technical support, and monitoring and supervision of small-scale mining activities. In relation to strategies adopted by traditional leaders and community members, little had been done. Traditional leaders only acknowledged interference to settle some misunderstanding between miners and community members especially on invaded lands, destruction of lands and property and discouraging bad mining practices. Community members on the other hand acknowledged forming youth groups to campaign for sound mining practices and less destructive methods. However, it was revealed that due to little or no collaboration between mining institutions and traditional leaders, the efforts of traditional leaders and community members created little impact on sound mining practices. Again, field visitation revealed that some miners were using mercury and other chemicals that pose threat to their well-being. Nevertheless, respondents’ perception on these institutions was not different. Interestingly, it was established that even though laws exist to regulate the activities of small scale miners, some officials, traditional authorities, community members and some miners indicated that institutions regarding the activity were ineffective. In confirmation of the poorly enforced and poorly regulated small scale mining system, majority of miners interviewed rated the Mineral’s Commission, the District Assembly and the Environmental Protection Agency (EPA) at par in carrying out their duties. The implication of this finding is that in practice strategies adopted by institutions responsible for monitoring the activities of SSM are implied but not working properly. Also the poor collaboration between these institutions and traditional leaders implies that traditional leaders are not fully abreast with the activity.

Conclusion

The mining industry at Mengwe is indeed a great potential to the development of the community as it provides employment to the population thereby reducing the unemployment rate in the community. It also serves as a source of income generation to the mining operators. This means that they have the opportunity to meet their basic needs and fulfill other economic obligations. The increase in income has also led to the improvement in the overall economic wellbeing of the people. However, despite these benefits of mining to the people, there are also negative effects associated with mining in the community; land degradation, land encroachment and decrease in agricultural labor have negatively affected agricultural outputs. The health of the people as well as their education is adversely affected as a result of the mining activities. The small-scale mining in the community would yield maximum benefits if stakeholders effectively and efficiently commit themselves to its operation.

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REFERENCES


