



Original Research Article

The Socio-cultural implications of small-scale mining in the Talensi-Nabdam District of the Upper East Region of Ghana

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This article is of the view that previous researches on the activities of illegal mining have neglected the implications on the socio-culture of host communities. It adopted mixed approach to data collection and analysis so as to enable the study adds figures to the descriptions given by the respondents. Its findings include: the depletion of raw materials for the craft industry and also in the lack of interest by the youth in craft activities due to high returns from the mines; the degradation of the land occasioned by the wanton destruction of the surface of the land has negatively affected the natural landscape design of some communities under study; the study confirms the view that policy makers, mining companies and illegal miners hardly consult host communities before undertaking their mining activities; the study revealed that even though there are instances of violent confrontations between the some community leaders and among small-scale mining operators the incidences of violence in the study communities have been minimal in the last five years and the study also observed that illegal mining activities do not occur on the cultural heritage sites in the five communities. The study recommended that communities to designate site as sources of raw materials for craft industry; setting up of community sanctioned task force to ensure that miners refill pits; the need for state institutions to adopt a purposive approach in dealing with illegal miners.

Key words: Small-scale mining, cultural implications, natural environment, Talensi district

INTRODUCTION

Despite the positive contributions of small-scale mining (such as employment for school drop-outs and contribution to gross domestic product) (Amankwaah and Anim-Sackey, 2003) the negative effects of small-scale mining activities on the natural and social environment is well documented (Hilson, 2001). Illegal small-scale mining activities have negative effects not only because of the modus operandi of the sector, but also as a result of deficiencies in the methods and tools used and the legal systems that regulate its operation (Hilson, 2002). Even though the Government of Ghana has recognized the small-scale mining sector as important to the economy, legal and policy frameworks

designed specifically for mining activities, both large and small-scale, appears weak in enforcement. For example, the Precious Minerals Marketing Corporation Law (PNMCL 219) allows the corporation to buy gold from anyone who has gold (Mining and Minerals Commission 2010). As a result of weak laws regulatory regimes and policy frameworks, small-scale mining activities are carried out in a haphazard fashion anywhere the mineral is located (Appiah, 1998). Miners and regulatory authorities such as the Ministry of Environment, Science and Technology, Forestry and Mines as well as traditional authorities play hide and seek with regards to adherence to national laws

and regulations with consequences on the environment and the socio-cultural wellbeing of the host mining communities. More research has been done to audit the activities of small-scale mining in Ghana and its effects on the natural environment. Recent research works in Ghana, notably, Hilson (2002) Akabzaa and Dramani (2001); Agyemang (2010); Agyemang et al. (2012) on the analysis of the socio-economic and environmental effects of small-scale mining to the neglect of a holistic analysis of the socio-cultural aspect of small-scale mining in communities where the activities are practice. Empirical evidence of environmental degradation, in most developing countries, attributed to the operations and practices of small-scale mining, without much consideration to social cultural impacts, are abundant. For example, in the Choco Region of Colombia, gold production increases 7.2% each year resulting in an estimated deforestation rate of 1,000 hectares per year (Lacerda and Solomons, 1998). In Zimbabwe, it is estimated that 100,000 hectares of arable lands are degraded annually due to the intensive operation of small-scale mining activities (Maponga and Anderson, 1995). In the Liptako-Gourma region of West Africa (which includes Burkina Faso, Mali and Niger) the intensity of small-scale mining operations has led to a widespread irreversible degradation of the environment (Traore, 1994). Prevalent small-scale metal and mineral extractions in the Brazilian Amazonian and southwest Colombia have contributed to environmental degradation (Lacerda and Solomons, 1998).

This article tends to fill the potential gap detected from literature and examine the socio-cultural implications of small-scale mining in the Talensi Community of the Upper East Region of Ghana. In this study, cultural effects of small-scale mining is understood as the implication of the activity on aesthetic, religious beliefs and creative industry; the consequences of the activity on cultural sources of income, production and consumption; cultural systems and structures of social control and decision-making processes; implications on cultural standards of acceptable level of violence and its implications on cultural heritage

Profile of study area

The area of this study is the Talensi-Nabdam districts of the Upper East Region of northern Ghana (Figure 1) is described as one of the most deprived and degraded areas of Ghana. The district was created through the splitting of the former Bolgatanga district into two administrative districts, namely Bolgatanga and Talensi-Nabdam with Bolgatanga as the regional capital (Crawford, 2004). They are located on the north-eastern corridor of Ghana between longitude 1°W and 0°E and 10°N and 11°N and cover an area of 1,509 km² or 16.7% of the 8,842 km² of the Upper East Region of Ghana.

The area falls within the Dickson and Benneh (1988) Guinea savannah zone that lies between 8° N and 13° N and corresponds to the tsetsefly zone known as the "*middle belt*" of West Africa. It is part of the tropical continental

climatic zone characterised by pronounced dry and wet seasons (Benneh et al., 1990). Rainfall is usually infrequent, discrete and largely unpredictable. The peak rainfall period is usually late August and early September with 60% of it occurring within the months of July to September (IFAD, 1990). Periods of dry season usually last for 5 to 6 months, from November to late March, with occasionally droughts at the beginning of rainy season (Bolgatanga Meteorological Service, 2012).

Temperature is consistently high with relatively small seasonal variations. The hottest months are from early March to late April, just before the beginning of the rainy season, while the major rains occur usually in August. Temperatures are usually within the range of 18 to 38°C with relative humidity of 69 to 95% (Bolgatanga Meteorological Service, 2012). Its soils are characterised by shallow, low in organic matter content and coarse in textured luvisols in the north eastern portion of the study area with ample evidence of the presence of minerals, especially gold. Soils are formed out of the rock types and the underlying geology which is mostly granite, birrimian rocks and sandstone producing loamy sand, sandy loam and sandy clay loam through weathering processes (Senaya et al., 1998). Natural vegetation is mainly savannah woodland of short, closed and scattered drought-resistant trees and grasses (of height 3 metres and above) that are frequently burnt and scorched by bushfires and the sun during the prolonged dry season.

METHODOLOGY

The study made use of both qualitative and quantitative data from primary and secondary sources. Secondary data were sourced from Ghana government mining policy documents from the Environmental Protection Agency and the Mining and Mineral Commission, Accra. Secondary data sourced were triangulated with primary data collected during field work. Under the primary data, focus group discussion was adopted to gather information on the cultural implications of small-scale mining in the study area. Focus groups discussions conducted included two gender based focus groups and an integrated focus group that included participants' who have in-depth knowledge of the topic-cultural and mining related issues in the Talensi District. In addition, 10 key informants' were interviewed under this study. They were made up of Chiefs, Tindamba, Herbalist, Chief Linguist, Pit Owners, Opinion Leaders, Assembly Persons, Talensi District Chief Executives, the district Planning Officer. The study conducted 5 interviews and the participants' included individual engaged in basket making, leather works, and calabash making. The study employed purposive sampling to capture the heterogeneity of the sample population; in sex, age, occupation, education, and their understanding of the cultural effects of small-scale mining on the host community. A sample size of 100 participants', 75 men and 25 women were used. The study adopted a mixed method approach to data analyses as a

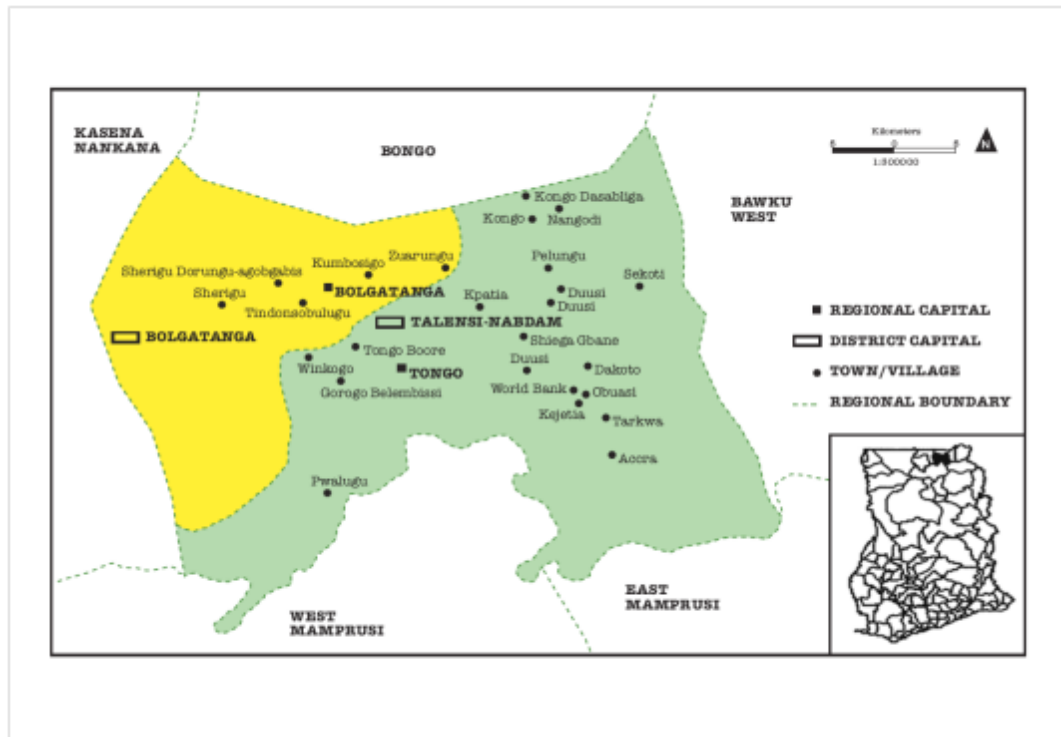


Figure 1: Map of Bolgatanga Municipal (yellow) also showing Study Area (in Green)

measure of internal validity.

RESULTS AND DISCUSSIONS

Craft industrial activities of cultural significance to the community

It has been documented that illegal mining activities have potential negative impacts on cultural and aesthetic resources such as complete destruction of the resources through surface exploitation or excavation; degradation due to topographic or hydrological pattern changes or from removal, erosion, sedimentation and unauthorized removal of artefacts or vandalism as a result of increased access to otherwise inaccessible resources (Environmental Law Alliance Worldwide, 2010). In order to be able to ascertain whether or not illegal mining activities have negative implications on craft industrial activities of any cultural significance to the communities, the study seeks find to out from individual respondents such as the pognaa, tindana, craft operators and the assembly men whether they are aware of some craft activities of cultural importance in the community.

Thirty-eight percent of respondents from Yameriga community indicated that there are craft activities of cultural significance. Also 3 percent of respondents from Gbani community were of the view that small-scale mining has a negative impact on craft activities. However, out of a

total of 4 respondents who did not know whether there are craft activities of cultural significance 75 percent of them are located in the Gbani community (Figure 2).

Even though the highest percentage of respondents of the self-administered questionnaire indicated that illegal mining has no negative impact on the craft industry, it was mentioned at the FGDs that illegal mining has negative impact on the following craft activities: bow and arrow crafting, cudgel carving, mortar and pistol, basketry and mat making. The explanation was given that because of the destruction of the vegetation cover by small-scale mining activities it has become difficult for people to get the raw materials needed for these articles without trespassing other communities' land, which often times generates misunderstanding. Aside, the depletion of raw materials by the activities of small-scale miners participants at the FGDs in the 5 communities mentioned that the craft industry appears to be dying because of the over concentration of the young men and women in the mining sectors, since illegal mining presents immediate and high incomes compared to craft.

More so, 75 percent of the total of 50 respondents to the self-administered questionnaire indicated that the activities of illegal mining present negative consequences to the craft industry in their communities. Only 10 percent of the respondents to the self-administered questionnaire do not know whether or not illegal mining present any negative implication to the craft industry in their communities. The 75 percent indication that illegal mining has no negative

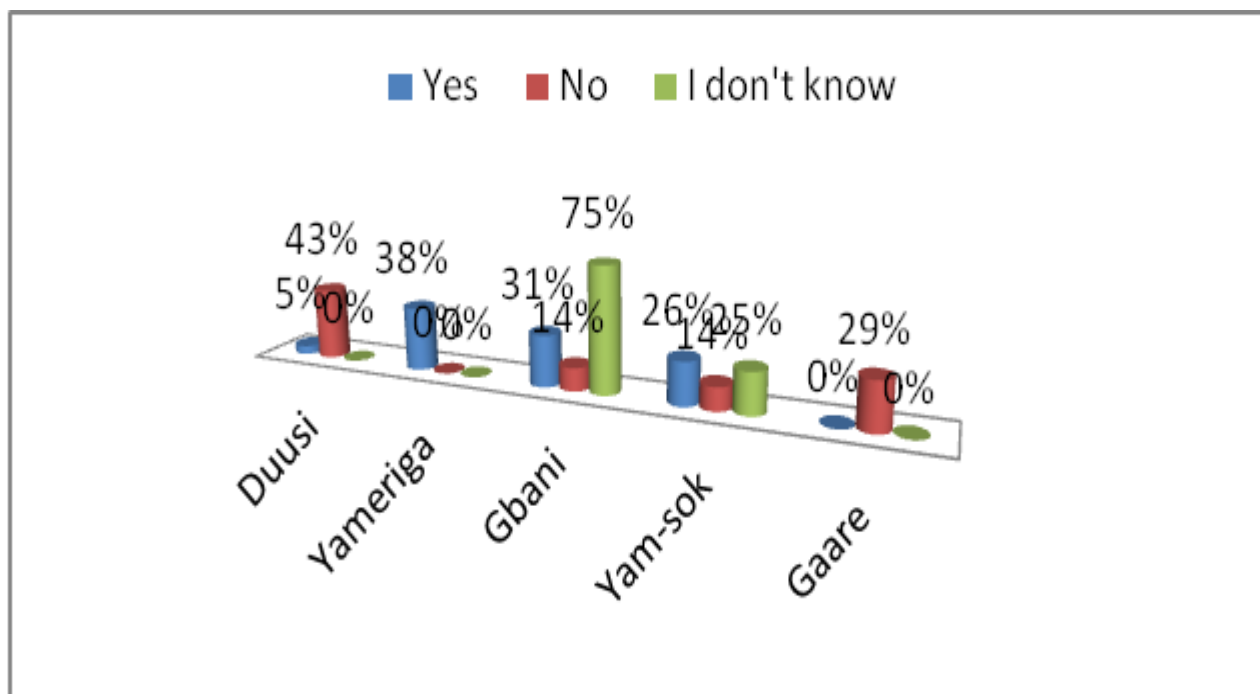


Figure 2: Responses on Existence of Craft Activities in the Community

Table 1. Views on Negative Impacts of Illegal Mining on Craft Industry

Community	Yes	No	I don't know
	%	%	%
Duusi	5	38	0
Yameriga	41	0	0
Gbani	32	25	40
Yam-sok	22	25	40
Gaare	0	13	20
Total	100	100	100

consequences on craft activities of cultural significance can be said to represent the views of the respondents who are themselves steeply involved in the small-scale mining activities. For example, in the process of administering the questionnaire a young man confronted the research assistants at the Duusi community and demanded to be given a questionnaire to answer. His point was that they are benefitting immensely from the illegal mining activities and if care is not taken research output such as this will paint a negative picture about their activities leading the closed of their activities.

Forty-one percent of respondents of the self-administered questionnaire who are located in the Yameriga community believed that illegal mining has negative impacts on the craft industry in the community. In the Gbani community, 22 percent of the respondents indicated that illegal mining has negative impact on craft industry whereas 25 percent indicated that there is no negative impact of illegal mining on the craft industry.

Also, 40 percent of the respondents who are uncertain about the implication of illegal mining on the craft industry are from the Gbani community. This can be understood given the fact that the illegal mining activities in the community and that companies such as Puboritaba, Tinsugtaba and Shaanxi Mining Company of Chinese Gold Group Limited which have been licensed to operate have begun to over-shadow the other economic activities in that community. More so, since most of the respondents in the Gbani community are stakeholders in the mines, their opinion about its impacts on craft industry is easily diluted as reflected in Table 1.

Implications of small-scale mining on the aesthetics and creative arts

The study sought to ascertain from the respondents the known negative impacts of small-scale mining on sites of aesthetic and creative importance (Table 2).

Table 2: Negative Impacts of Illegal Mining on Land of Aesthetic Importance

Community	Yes		No		I don't know	
	Freq	%	Frequency	%	Freq	%
Duusi	4	9	0	0	1	100
Yameriga	13	28	1	50	0	0
Gbani	16	35	0	0	0	0
Yam-sok	12	26	0	0	0	0
Gaare	1	2	1	50	0	0
Total	46	100%	2	100%	1	100%

From Table 2 it is clear that Gbane is the community which recorded the highest percentage of respondents who indicated that they are aware of the negative impacts of illegal mining on land of aesthetic importance. However, results from FGDs indicated that scared sites such as *Da-aba* and *Bagam* are not in any way affected by the activities of illegal mining in the community. But the study cannot reject the results from the individual questionnaire because a gate-keeper had alleged that the chief of the community is complicit in the illegal mining activity and given his unsolicited and domineering presence at the FGDs may have muted the views of participants concerning realities on the ground.

Also 26 percent of the respondents from Yam-sok indicated their awareness of illegal mining activities going on land of aesthetic significance in the community. Examples of such lands include: *ma-mon zoore* and *tingbanbil* which they claimed used to present green cover to the environment during the rainy season and also served as pastures. However, with the introduction of illegal mining activities on these lands their green beauty has been depleted. Key informants and discussants at the FGDs indicated the activities of small-scale mining have negatively affected natural landscape design of their community since the hills have been levelled thus distorting the natural beauty of the community.

Respondents of the self-administered questionnaire described the beauty of their land before the onslaught of illegal mining in the following forms:

- Availability of herbs for treatment of illnesses and protection against invasion of the enemy.
- Green and hilly lands for animal grazing/pastures.
- Availability of game which serve the nutritional needs of the community.
- Big trees in the community that provided shade for community members during festivals and also served as windbreaks for the thatch roofs.

In discussing the specific impacts of illegal mining on the craft industry, the following issues emerged:

- The felling of trees in and around the community makes it difficult for artisans to get raw materials for the wood related craft industry e.g. mortar, pistol and hoe handle.
- Because of the open pits the cultivation of crops such as guinea corn is difficult thus impossible to get

the stalks needed for the manufacture of mats.

- Also because of the perceived high returns from small-scale mining the youth are unwilling to learn the cultural craft activities thus through these crafts into oblivion.

Participation in decisions-making on impacts of small-scale mining on livelihoods

The Economic Commission on Africa (2009) is of the view that the top-down approach to planning and decision-making in the mining sector explains the alienation of the host communities from benefitting equitable from the resources and the resultant legal and extra-legal protest from the host communities. In this vein the study attempted to ascertain whether or not the people of the community truly participate in decision-making regarding the emerging mining industry in the area.

Ninety-eight percent of the respondents of the study indicated that they are aware of small-scale mining activities taking place in and around their communities. As regards community participation in decision-making the study sought to find out whether there has ever been any consultative stakeholder meeting among the proponents of mining activity, the community and the Environmental Protection Agency. Figure 3 indicates that 72 percent of the respondents have never heard or seen any of such a meeting in their communities.

With specific reference to illegal mining activities which is mainly conducted by youth of the host communities the study attempted to clarify whether the miners and leaders of the communities have ever held a meeting to discuss matters of interest to the community. This information is relevant in assisting the study to understand whether community leadership and the miners alike take the negative impacts of mining on the environment as an issue that concern them and should be collectively addressed. As evident in Table 3, 72 percent of the respondents of the study indicated that there has never been any meeting between the community leaders and the small-scale mining operators. It is worth emphasising here that this very response corroborates the similar results on whether there has ever been a meeting between proponents of mining, EPA and the community leaders.

In-depth interviews conducted with Environmental

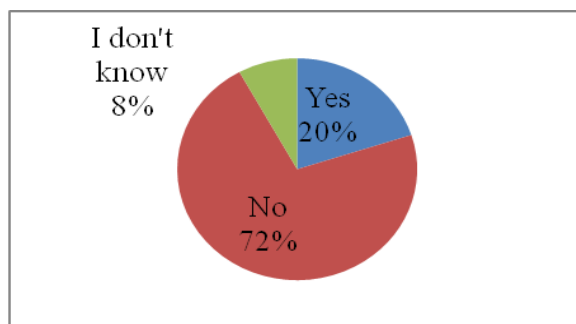


Figure 3: Respondents Awareness of Consultative Stakeholder Meeting

Table 3. Responses on Stakeholder Meeting with Small-Scale Miners

Responses	Frequency	%
Yes	8	16
No	36	72
I don't know	6	12
Total	50	100

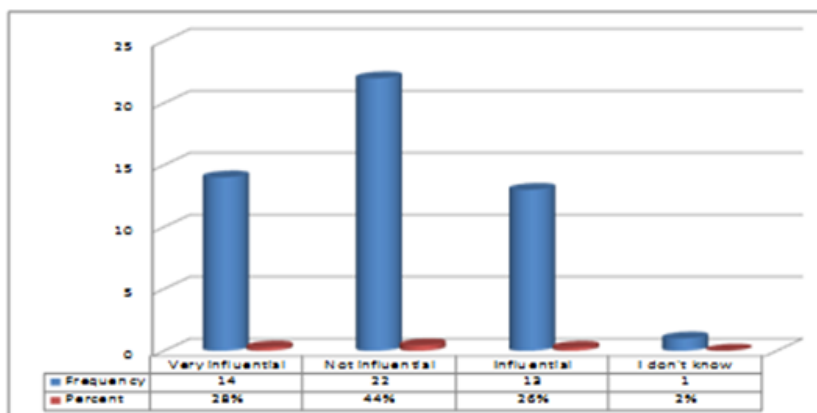


Figure 4: Influence of community leaders on Mining Activity

Protection Agency, the Minerals Commission and the Talensi District Assembly confirmed the observation that there has never been any stakeholders meeting involving the community leadership, the government agencies and the small-scale mining operators. Their reason was that the activities are an illegality under the Ghanaian law and therefore for any community leader or government agency to be seen meeting with them will amount to dabbling in an illegality. From the legal and law enforcement point of view it may be reasonable not to confer with people committing an illegality but from an output point of view it is not in the interest and good of both government agencies and community leaders not to engage the operators. Willy-nilly, the operation has become a thriving source of livelihood and inasmuch as the government has not been able to fashion out alternative livelihoods programmes with higher

rate of returns for the miners they will continue to engage in the illegality. As they continue to conduct their illegal livelihood programmes they will continue to leave deleterious impacts on the environment for which the government will have to spend scarce resources in mitigating.

Additionally, this study elicited from the respondents their own assessment of the level of influence their community leaders in taking and enforcement of decision on whether or not to carry out illegal or small-scale mining on a particular piece of land in the community. The essence of the question is to ascertain the level of influence of community level leaders such as the Tindana, the chief and the Assemblyman on negative land use practices in the community. Figure 4 demonstrates that 44 percent of the respondents perceived their community leaders as not

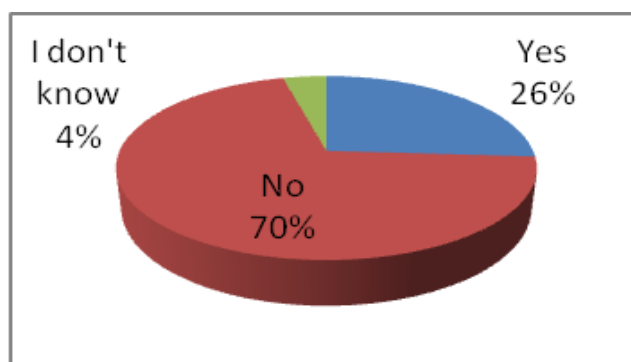


Figure 5: Responses on Payment of Compensation

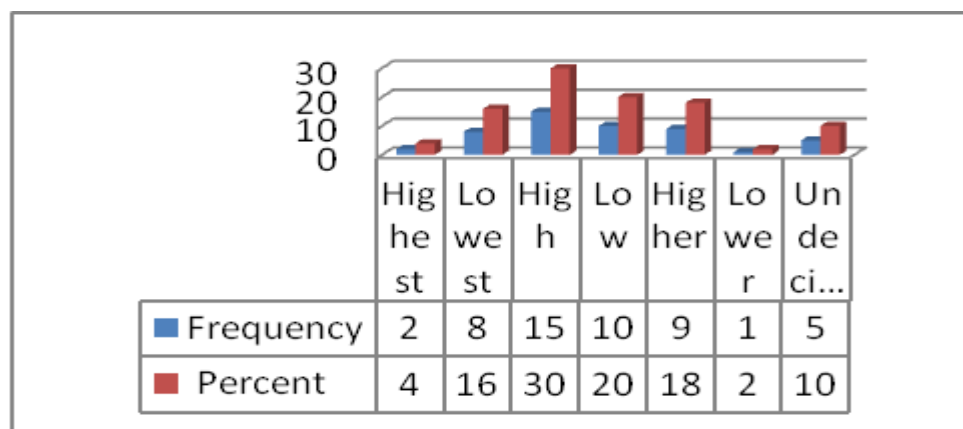


Figure 6: Comparative Assessment of Level of Violence in Mining Communities

influential regarding the taking of and enforcement of decision on to or not to mine in the community.

At the level of key informant interviews, interviewee mentioned that most of the mining activities are carried out by young men and women from the community and on their family/lineage lands. As members of the family/lineage the head of the entity holds the land in trust and administer portions of it to individuals for livelihoods activities. In these circumstances it is extremely difficult for the family/lineage head to tell someone not mine on a land that is jointly owned.

Besides, the study inquired from respondents such as *pognaa*, chiefs, assembly men, farm owners and mining operators and youth leaders whether or not compensation is paid when illegal miners encroach on the land of farmers. However, results obtained through self-administered questionnaire revealed that whereas 26 percent of the respondents indicated that mining operators pay compensation to persons whose farm they encroached, 70 percent of the respondents are of the view that no compensation is paid to farmers whose farms are encroached by the miners(Figure 5). Explaining the forms of compensation , some respondents indicated that mining operators often give some amount from their earnings to the affected farmer but where they have a deal with the

farmer to mine on his land the total revenue generated from the proceeds are shared between the farmer and the mining operator(s).

Even though some mining operators are kind enough to share the proceeds from their operations with affected farmer it is clear from the responses in the questionnaire, FGDs and key informants that there is no community-wide agreement that the mining operators should compensate affected farmers. From the discussion with study participants the hardest hit in terms of encroachment of farm lands are the old man and women whose young sons convert their farms into pits only to get money to buy motorbikes and engaged excessive drinking.

Implication of illegal small-scale mining on the level of violence

It is mostly the case that wherever there is illegal mining activity the level of violence and anti-social conduct is mostly likely to be high (Kitula, 2006; Akabzaa and Darimani, 2001).

To this end the study solicited from the respondents their own assessment of the level of violent activities in their communities compared to 5 year before the emergence of illegal mining. It is manifest in Figure 6 that 30 percent of

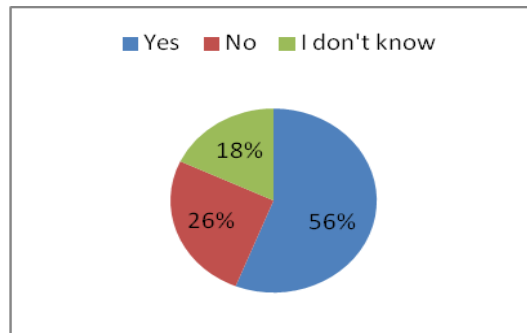


Figure 7: Perceived Relationships between Level of Violence and Illegal Mining

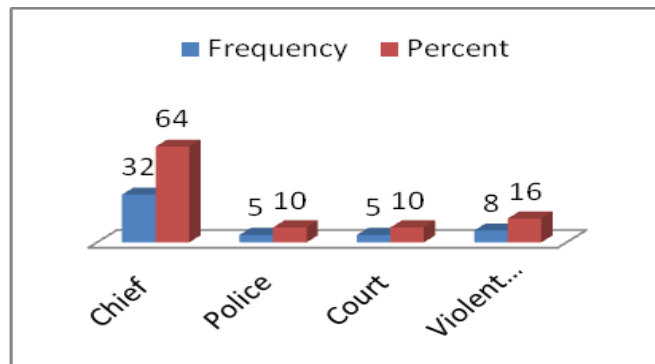


Figure 8: Forums of Laying Complaints on Alienation from Land

the respondents are of the view that the current level of violence in their communities is high compared to some five years before the emergence of illegal mining activities. Even though 20 percent of the respondents indicated that the level of violence now is on the lower side compared some five years back the fact that 18 percent of the respondents rated the level of violence to be higher plus those intimating that it is high makes a case that the level of violence in the mining communities have deteriorated over the last five years.

However, it must be acknowledged that there mere indication that the level of violence in the community over the past five has deteriorated cannot be blame on illegal mining activities. Therefore, respondents were further expressly asked whether the illegal mining activities in their communities have any implication on the level of violence in their communities. Figure 7 indicates that 56 percent of the respondents believed that the level of violence in their communities has a direct relationship with the illegal mining activities. It was explained that the violence arising out of mining activities is often between the mining operators themselves on the one hand and between the chief and the assembly man at the other hand. For example, where a miner discovers gold rich pit and another takes over the pit it often leads to serious fight among the mining operators. On the other hand respondents elucidated the point that

when chiefs collect money from Chinese miners, give them sites to mine and singlehanded spend the money without the knowledge of the assembly man is often the source of violence in the mining community. This insinuation can be attributed to a particular chief in one of the mining communities where the chief is alleged to have in concert with some political leaders aided a Chinese mining company to directly engage in underground mining even beyond their concession area under the pretext of providing technical support. It was reported by key informants that the assembly man of the electoral area in question who stood up to challenge the chief on the matter was arrested and detained by the police for no crime or offence committed.

Usually due to the high monetary value that gold command in both national and international markets the emergence of illegal mining activities often come along with the alienation of the indigenous from their land, which hitherto was their main source of livelihood, blessing and identity. This alienation of the autochthonous from their land in some cases has met both legal and extra-legal resistance (Economic Commission of Africa, 2009). Consequently this study seeks to know how members of the communities deal with alienation related matters when they feel their lands are being taken away by mining operators. Figure 8 reveals that 64 percent of the respondents of the study report matters pertaining to the

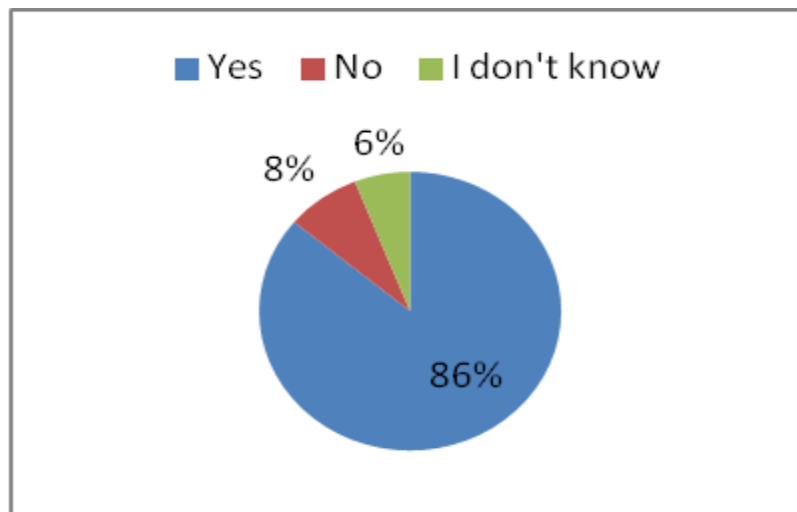


Figure 9: Existence of Cultural Heritage Sites

encroachment of their land by the miners to their chiefs. However, 16 percent of the respondents indicated that when they observe that their land has been encroaching by the miners they take recourse to violent confrontation with the mining operators.

It needs to be noted that in the Duusi community, FGDs revealed that illegal mining has led to increased instances of mining operators having sexual intercourse with married women and that this has created bad blood among young men in the community although it has never resulted in open street fight.

Effects of small-scale and preservation of cultural heritage sites

In order to understand the effects of illegal mining on cultural heritage sites the study asked respondent whether there exist cultural heritage sites in their various communities. Figure 9 reveals that 86 percent of the respondents indicated that there are cultural heritage sites in their communities. The assurance that there existed cultural heritage sites in the community was a motivation for the study to further ascertain the known effects or otherwise of illegal mining on these sites.

Institutional respondents such as the District Coordinator (used in the sense of Minerals Commission's administrative district but not political administrative district) of the Mineral Commission, the Deputy District Coordinating Director for the Talensi District and the Upper East Regional Director of the EPA were of the view that by law and practice mineral extraction are not permissible on cultural heritage sites. But given the fact that these institutions do not supervise the activities of illegal miners there is the need to ascertain this from the communities themselves.

During interviews and discussion with community level respondents such as the Tindana, pognaa and the chiefs it

was realised that most of the cultural heritage sites in the five study communities are in the form of shrines. Although respondents in the self-administered questionnaire indicated that illegal mining has a toll on cultural heritage site some participants at the FGDs and key informants interviews were of the view that illegal miners do not carry out their activities on those sites. But key informants at Duusi indicated that illegal mining has serious consequences on cultural heritage sites even though illegal miners do not operate at places where the community shrines are located. For example, respondents explained that it is a taboo for anyone to wail in the community except on the death of a person and when it happens the individual involved is asked to pay a fine. With the incomes from mining and the miners no longer find the fine punitive enough and as such some of the miners deliberately wail in order to be asked to pay the fine. Also, in the Duusi community there is a festival called *tenglegere* during which members of the community make merry as if hell or heaven has been left loose. Except this day (the day that mark *tenglegere*) which is specifically reserved for excessive merry making no body in the community has the right to make merry, but with the emergence of mining and income from the miners this is hardly observed.

Also, it became evident in the Gbani community that the *da-abaa* which used to be a reserved site where no bush burning or hunting takes place until the onset of the rain has been taken over and exploited by the mining operators.

Conclusions

The study concludes that the activities of illegal mining have the potential to kill the craft industry by way of depletion of its source of raw materials and lack of interest in learning the trade by the youth. It is also concluded that the digging of pits for gold extraction has negative

implications on the natural landscape design and the beauty it presents as well as threat to human life and property. Also, this study concludes that there is no stakeholder participation in terms of decision-making on gold extraction in the study communities and that this does not serve the interest of good environmental management. Although the level and types of violence conduct in the study communities are relatively low the study concludes that the activities is a potential for high incidence of violence because community leaders have not been able to nip the perpetration of minor offences against their culture and tradition in the bud. More so, the study concludes that the impact of the illegal mining on the preservation of cultural heritage sites appears insignificant since the violations that have occurred with regards to cultural heritage sites are peripheral to the physical location of these sites.

Recommendations

The study recommends that the community leaders, the Forestry Commission, the EPA and the National Board for Small-scale Industries designate selected sites where raw materials for craft industries are located in the various communities as protected areas so as to assure of future availability of raw materials. It is recommended that in order for the communities to preserve their aesthetic beauty bestowed by nature, they should form a task force that will ensure that the operators refill all pits that they have dug before moving on to new area. This will also reduce threat to human life and property that the open pits presents. It is further recommended that stakeholders in mining and environmental management should adopt a purposive approach for enforcing their mandate by engaging the mining operators on how to manage the environment rather than live them on their ores. In order to maintain the current low levels of violence in the mining communities it is recommended that the community leaders and the leaders of the mining operators fashion out a structured dialogue as an avenue for addressing concerns from both side.

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