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Impact of mining in Obuasi Municipality in Ashanti region of Ghana: An assessment of human rights concerns in mining communities

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Abstract: Ghana is endowed with significant mineral resources and has a formidable mining sector which has grown considerably in recent years to represent an important pillar of the economy. In spite of these positive indicators, the overall contribution of the mining industry in the economic development of Ghana is a suspect as there are consequences people living in mining communities suffer. The study aimed to assess the impact of mining on the lives of people living in Obuasi Municipality. Both probability and non-probability research techniques were chosen for the study. In all, 154 respondents were recruited for the study. The study found that mining, which is an industrial activity, comes with negative impacts, resulting in human rights violations such denial of right to work, education and health. People in mining communities will be forever live in abject poverty and rampant rights abuse should mechanism not be put in place to enhance their welfare. For instance, parliament should review the existing land valuation act so as to improve on payment of compensation to people whose lands have been taken by mining companies. Also, mining companies should institute training programmes aimed at enhancing the youth with employable skills in order to enable them participate in economic activities.

Keywords: Mining, human rights, violations, governmental agencies, compensation, infringement.

INTRODUCTION

Mineral resources play a significant role in the world economy. Warshurst [1] noted that majority of countries depend on the sector as the basis for economic development. For instance, the mining industry accounts for 50% of annual export earnings in Peru in 1993.Elsewhere, a 2008 report on the mining industry of South Africa elaborated the contribution of the industry to its economy. The industry contributed 65% of the country's exports in 2006 as well as being the biggest employer in the same period. This is made up of around 460,000 employees and another 400,000 employed by the suppliers of goods and services to the industry [2]. Additionally, countries in sub-Sahara Africa also rely on the extractive sector to boast their economic. According to Akabzaa, Sekyire, and Afrivie [3], the continent hosts 75% of global cobalt and platinum reserves, 50% of diamond, 47% of world's phosphate reserves, 45% of chromites and 30% of the gold worldwide, 26% bauxite, 14% of copper, 12% of uranium and manganese and 6.8% iron- ore reserves in the world. This makes the African continent relevant in relation to mineral exploration.

Similarly, Ghana is endowed with significant mineral resources and has a formidable mining sector which has grown considerably in recent years to represent an important pillar of the economy. Awudi [4]mentioned that "the sector attracted US \$2 billion of foreign direct investment (FDI) in mineral exploration and mine development during the last decade, representing over 56% of the total FDI flows to the country." Also, Akabzaa and Darimani [5] the contribution of the industry in relation to the local economy which comes in the form of salaries of mine workers, corporate income taxes, concession rents, customs and harbor duties. According to United Nations Commission on Sustainable Development [6] report, the mineral industry generate 11% of government income between 2000 and 2008 period in the form taxes and rovalties.

In spite of these positive indicators, the overall contribution of the mining industry in the economic development of Ghana is a suspect [7, 3, 5, 4, 8]. Cronin and Pandya [9]revealed in their study that inhabitants around mining concessions are subjected to inhumane treatment.Owusu-Koranteng [10]noted that the increased investments in the mining industry have

meant gross human rights abuses for communities living in and around mining concessions. This is in the form of police and army brutalities, land confiscation, pollution of drinking water sources, ill-health and abject poverty[4, 10]. For instance, Akabzaa and Darimani[3] observed that large-scale mining has taken up enormous land from farmers whiles mining activities do not provide jobs to the people to augment total number of people laid off from agriculture due to the presence of mining activities. In addition, Cronin and Pandya[9] noted that mining companies operate with little concern for human right and environmental impacts of their activities. The impact of mining is severe in areas of long exploration. Kitula [8] mentioned some of these impacts to include "displacement of local people from ancestral lands, marginalization and oppression of people belonging to lower economic classes."

Therefore, since Obuasi is a town noted for long years of gold mining, there is the need to undertake such studies in order to ascertain the velocity of notions held about mining communities. It may appear that communities around the mining concessions also face such negative consequences of mining. Therefore, the purpose of the study is to determine whether the rights of people living around Obuasi municipalities are trampled upon resulting from the activities of AngloGold Ashanti. The study intends to determine the extent to which such people enjoy their fundamental freedoms mandated by law.

MATERIALS AND METHODS Study design

This study is a cross-sectional study which employed quantitative methods to explore information on the human rights concerns in mining communities in Obuasi Municipality. Cross- sectional design type helped the researcher to obtain the needed information on time. It is a study design that is conducted within a short period at a particular point in time. On the other hand, quantitative data collection method uses statistical models to measure the actual observed outcomes from respondent-completed questionnaires, surveys or clinical tests[11, 12, 13]. Therefore, since most studies has focused on environmental impacts of mining in Ghana, there was the need for the study explore the human rights concerns in mining communities in Obuasi Municipality.

Study site

The study was conducted in Obuasi municipality in Ashanti region of Ghana. Due to long history of mining in the area, it was appropriate that such a study was conducted in that area. The Obuasi Municipality is one of 26 districts of the Ashanti Region and was created as part of the government's effort to further decentralized governance. The Municipality is located at the southern part of Ashanti Region between latitude 5.35N and 5.65N and longitude 6.35N and 6.90N. It covers a land area of 162.4sqkm and is the second largest political authority in the region after Kumasi Metropolitan Assembly (K.M.A.). There are 62 communities in the municipality with 30 Electoral Areas, and one zonal council. The Municipality experiences semi-equatorial climatic conditions with a double maximum rainfall regime. Mean annual rainfall ranges between 125mm and 175mm. Mean average annual temperature is 25.5oC and relative humidity is 75% - 80% in the wet season. The vegetation is predominantly a degraded and semi-deciduous forest. The forest consists of limited species of hard wood which are harvested as lumber. The Municipality has nice scenery due to the hilly nature of the environment. Agriculture and its related activities, ranks third in the order of economic activities in the Obuasi Municipality, employing about 15% of the labor force [14].

Sampling technique

Both probability and non-probability research techniques were chosen for the study. These are purposive and simple random sampling methods.With purposive sampling, the researcher employs his or her own judgment about who to include in the sample frame based on certain characteristics [11, 15, 16]. According to David and Sutton [17], in purposive sampling "the units are selected according to the researcher's own knowledge and opinion about which ones they think will be appropriate to the topic area." This connotes that purposive sampling is targeted and specific to particular respondents. In this study, respondents were selected to be part of the study based on certain characteristics they possessed. These are their involvement in mining operations as well as their status within the mining communities. For instance, officials of AngloGold Ashanti, environmental protection Agency (EPA), commission on human rights and administrative justice (CHRAJ), Lands Commission, Minerals Commission as well as chiefs, opinion leaders and healthcare workers were contacted for relevant information due to their status. The technique enabled the researcher to select respondents who could give satisfactory answers to the interview questions. In the same way, the simple random sampling method enables the researcher to administer questionnaires to people in the study areas. This paved the way for a balanced response in relations to what persists on the grounds as different people ranging from the educated, non-educated, employed and the unemployed had the opportunity to take part in the study.

Study participants

The study involved participants from mining communities and officials of AngloGold Ashanti as well as governmental officials. Five communities in the Obuasi Municipality were selected for the purpose of the research. These were Ahansoyewodea, Anwiam, Anyinam, Binsere and Sansu. These communities were selected based on their proximity to the mines.In addition, there were interviews with officials of AngloGold Ashanti andofficials of governmental agencies such asObuasi Municipal Assembly, Environmental Protection Agency (E.P.A), Commission on Human Rights and Administrative Justice (CHRAJ) and Lands Commission and the Minerals Commission. In addition,healthcare workers from each community were also contacted as well as chiefs and opinion leaders in the communities.

Data handling and analysis

The researchers ensured that all filled questionnaires were kept under locked after data collection. This ensured that the data were kept confidential. All questionnaires were checked to ensure completeness and consistency prior data entry. The data was then entered into the Statistical Package for Social Sciences Software 20 which made the data entry easy than manual process and reduced human errors. Data collected were summarized and stored in statistical tables.

Ethical consideration

Ethical clearance was obtained from KNUST before the fieldwork. The researcher respected the right of the respondents and ensured that informed consent was completed before carrying out any interview or questionnaire administration.

FINDINGS

Background characteristics

The study sought information about the demographic characteristics of participants recruited for the study which has been summarized in Table 1. The main demographic features of participants analyzed in this study included the position of participants, gender, age, religion, marital status and educational status. Participants for the study were recruited from the mining communities and officials who are in charge of supervising and enforcing legal frameworks. The highest participants were selected from Anyinam, that is, 19.5% due to its proximity to the mine. Also, 25 participants, representing 16.2% were selected from Ahansoyewodea. Similarly, 13% of participants were recruited from each of the three remaining communities; Anwiam, Binsere and Sansu. In the same way, 39 participants were selected from officials supervising and monitoring the activities of the mining company in Obuasi. These include health workers

(6.5%), opinion leaders (5.8%), officials of the corporate and social responsibility and environmental department of AngloGold Ashanti (AGA), (3.2%), and Chiefs from each of the community (3.2). Others were officials of district commission on human rights and administrative justice (CHRAJ), (1.3%), Environmental Protection Agency (EPA), (1.3), and 1.3% of participants recruited from Lands commission and Obuasi Municipal Assembly. In all, the mean age of participants was 38.

Knowledge on human rights

Respondents were asked whether they were aware of any fundamental human rights of the individual citizen as enshrined in the constitution of Ghana. Out of 154 participants, 73 representing 47.4% answered yes; indicating that they had an idea of their rights in the constitution whiles 81 participants, representing 52.6% had no knowledge about their rights as spelt out in the constitution. This could be as a result of high rate of illiteracy among the people in the communities. This could be confirmed from the educational level of participants.Only 16.2% of participants have completed tertiary institution while 57 participants representing 37% reached Junior High School (JHS). Also, 28 participants representing 18.2 participants have had primary education as well as 44 participants; representing 28.6% have been able to complete Senior Secondary Education (SSS).

Human right violations

Participants were asked as to whether the activities of AGA violate their rights. Over 90% of participants said that the activities of mining in the community violate the rights of people in the mining communities. According to an official AGA, the activities of the mining company violate the rights of the people in the host communities and measures are put in place to mitigate its effects. Also, the Environmental Health Officer at Obuasi Municipality confirmed that the operation of AGA in the area mostly violates the rights of people in the mining community. Similarly, the principal assistant registrar of the commission on human rights and administrative justice (CHRAJ) in the Obuasi Municipality also admitted that mining does violate the rights of the people in the host communities.Table 2 summarizes the results of the study.

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		SSS	44	28.6
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	Total		154	100

Table 1: Demographic information of participants

Source: Field Data, 2014

Table 2: Distribution	of mining	g methods and	effects of mining

	components	Frequency	Percentage (100%)
Mining method			
	Surface	51	33.1
	Underground	48	31.2
	Both	55	35.7
Total		154	100
Effect			
	Land	46	30
	water	42	27.3
	Air	31	20
	Building	35	22.7
Total		154	100
Rights abused			
	Right to health	27	17.5
	Right to work	41	26.6
	Right to	18	11.7
	property		
	Adequate	35	22.7
	compensation		
	Right to food	33	21.4
Total		154	100

Source: Field Data, 2014

Participants discussed mining methods used by AGA in their communities. It was revealed that both surface and underground mining methods are used. In relation to surface mining, 51 participants mentioned that it was the mining method being used in their community while 55 participants (35.7%) disclosed that both surface and underground mining were the method of mining. Similarly, participants demonstrated in-depth knowledge of environmental effects of both surface and underground mining activities on their respective communities. They noted the effects of both surface and underground mining. According to the participants, both types of mining leads to the destruction of landscapes, forests and wildlife habitats as well as the removal of the topsoil of the mined area. This in turn leads to soil erosion and destruction of agricultural land. The use of heavy machines and chemicals underground do not only cause instability within the earth crust but also underground water which serves as source of water to various water bodies as the area is polluted due to its contact with poisonous liquids from the mines.

Furthermore, the study findings revealed that 26.6% of participants mentioned that the activities of mining deny right to work in the communities. This was attributed to the mining activities, as several farmlands have either been reserved for mining activities or degraded. It must be put on record that most of the people who have been denied their right to work were farmers who are custodians of primary food production. The respondent mentioned that unemployment is on the increase due to seizure of lands by AGA. Others who are still into farming have limited land size of about two acres to farm.

Similarly, participants said that the lack of land to farm have affected food production in Obuasi Municipality leading to high cost of living. The local folks in these mining communities are forced to compete with AGA workers whose income levels are considerably higher. In an interview with some market women to find out the prices of some commodities at Obuasi, it became clear that indeed their prices were higher as compared to even the regional capital, Kumasi. 50 tubers of 'pona' yam costs GH¢100 in Kumasi whiles the same tubers of 'pona' yam costs GH¢200. Five fingers of plantain costs GH¢1 in Kumasi whiles less than 5 fingers, that is, 3 fingers of plantain costs GH¢2 at Obuasi. For instance, data from Ministry of Agriculture confirmed that food production in Obuasi has experienced drastic reduction. In 2002, MOFA set a target of 2000 hectare for maize production but the achieved target was 750 hectares. Additionally, in 2005 and 2006, a target of 200 hectares was set but only 180 and 170 hectares respectively were achieved. Also, target for yam was 80 hectares in 2005 but 20 hectares was achieved. For 2002, the target area for plantain was 2000 hectares but in 2005, the set target was 80 hectares. The achieved yield for cassava in 2002 was 6240 metric tons but in 2005, only 900 metric tons targets were met. This clearly indicates that there is something militating against food production in the region which respondents attribute it to seizure of lands by AGA.

Additionally, small scale mining is on the increase in the mining communities. The study findings revealed that 51% of the respondents were engaged in small scale mining and these are mostly the youth who fall within the age bracket of 21-30 years. The respondents revealed that their family lands have been seized by the company and that there are no jobs available to absorb them. This compels them to engage in this dangerous act of illegal mining. Also, 35 participants (22.7%) said that right to adequate compensation are among rights frequently abused in the mining communities. Participants complained about inadequate compensation paid to them after their lands have been taken by the company. Some participant complained that they did not receive any compensation for the destruction of their farms by AGA whiles others complained about the amount paid to them. According to a chief in one of the communities, AGA destroyed 10 hectare farmland in 2006 but he was given only a paltry GH¢200 as compensation. There is no denial of the fact that compensation payment to people whose properties have been destroyed is a long standing issue.

On the issue of compensation, an official of Land Commission discussed the mode of calculation of compensation and reasons why farmers receive less or no compensation. It became evident that two methods are used in determining amount of money paid to farmers; that is, investment and counting methods. With regard to the investment method, records in passbooks of farmers are used to make the payments but this method is not in use because most of the farmers do not have the passbook. On the other hand, the official confirmed that they take into consideration the number of trees on the farm multiplied by the size of the farm. The figure given was that a cocoa tree ranges from GH¢ 5-6 and the value of oil pam is GH¢ 12.50p.Such method of compensation has done little to improve the livelihood of the local communities which is a violation of the provisions in the minerals and mining laws of Ghana.

Moreover, mining activities cause problems by damaging the health and livelihoods of the local people.Participants (22.7%) said that mining activities by AGA in Obuasi municipality affects their health. Participants confirmed that the operations of AGA actually contribute to some of the daily cases reported in the hospital. Some of the diseases they mentioned include malaria, diarrhoea, skin diseases, fever, tuberculosis, colds and catarrh, injuries and rheumatism.This is might be as a result of

environmental degradation which impact negatively on the health of people living around mining communities. One health worker said that the high prevalence of malaria in the area is attributed to mosquito breeding from polluted water courses, tailing dams and other stagnant water collected in holes and pits created as a result of mining activities. Another health worker mentioned that respiratory infections were as a result of dust that emanates from the operations of AGA and also from chemicals used in the processing plants. Similarly, one opinion leader stated that "we are all sick due to the nature of water we drink and even doctor told me to change my drinking water but I have no choice than to stick to it."

Environmental Impact Assessment: EPA's Akoben Rating

Environmental Protection Agency (EPA) which is the environmental impact assessment (EIA) authority in Ghana has introduced the Akoben rating programme which assesses the environmental performance of mining companies in Ghana. The ratings are done periodically in order to ascertain the extent to which mining companies comply with provisions stipulated in their EIA processes. Also, the programme provides opportunity for monitoring as well as verification of how the companies comply with environmental regulations. The ratings intend to disclose to the public the performance of companies in relation to environmental regulations. EPA uses five colors to indicate environmental performance of mining companies. These are Gold, Green, Blue, Orange and Red. Blue denotes that the company's performance is good and compliance with environmental standards. The colorGreen means that the company's performance is very good and responsible to public complaints. Gold means that the performance of the company in that category is excellent as they follow their corporate social responsibility. Red also means that the company performed poorly in that field and has not fulfilled the requirements of EPA Act and creates risks because of toxic and hazardous mismanagement. Orange means that the performance of the company in that category is unsatisfactory and that they exceed the regulatory standards.

Records available at EPA confirm that AngloGold Ashanti are not conforming to standards in their operations. For instance, in terms of Hazard Waste Management and Toxic Release 3a, AGA was rated R, indicating poor. Also, AGA was rated O on Environmental Best Practice, Monitoring and Non-Toxic Releases 3b. The performance of AGA in relation to the Akobens rating programme used by EPA to assess mining companies in Ghana is summarized in Table 3.

Table 3: EPA Ghana Akoben programme rating results				
Company	Rating components	Ratings	Final ratings	
AngloGold Ashanti				
	Legal Issues	В		
	Hazard Waste Management	R		
	Toxic Release 3a	R		
	Non-Toxic Releases 3b	0		
	Monitoring	0		
	Environmental Best Practice	0		
	Community Compliance	G		
	Corporate Social Responsibility	G*		
			R	

Table 3: EPA Ghana Akoben programme rating results

B-Good, R- Poor, O-Unsatisfactory, G-Very Good, G*-Excellent Source: EPA, 2010

The performance of AGA attests to the fact that the company has not performed well when it comes to compliance with environmental regulations. One official of EPA stated that:

> EPA is effectively and efficiently addressing all issues spelt out in the company's EIA document. EPA has cautioned AGA and we gave them warning notices but because of cyanide spillage last year, we fine them GH¢ 700, 00

Another official at the environmental department of AGA mentioned that:

We are aware that our operations do violate the rights of the people in the mining communities and we have been putting measures in place to address the problems; noise pollution, cracks in buildings, pollution of water bodies, emission of poisonous gas into the atmosphere, dust emissions and open pit. AGA has minimized surface mining operations and focused more on underground mining due to the impacts associated with it. It is because of these challenges that the company faces, the environmental department has not achieved its target. It is gradual process and we are working on it.

It is quite obvious that the activities of the company have effect on the lives of people in the mining communities which are known to the regulatory authority and the environmental department of the company itself.

DISCUSSION

The aim of the study was to examine the human rights concerns in communities around AGA concessions. The results of the study showed that the rights of people in mining communities are mostly trampled upon due to mining activities. This finding corroborates with other studies [7, 18, 19]. The study found that literacy level in mining communities was low and this might explain why most participants in the communities were unaware about fundamental rights enshrined in the constitution. It is possible that mining activities might have contributed to the rate of illiteracy in the communities as most families may not be able to support education of their children due to seizure of lands which could be a major source of livelihood to the people. This is probably the reason why most people in the mining communities are unable to ascertain whether or not their rights have been trampled upon in relations to with the activities of mining within their environs. These findings are consistent with studies byVedasto [19], Action Aid International [7]and Third World Network Africa [18]. These studies found that the high rate of illiteracy in the communities restrict the people from seeking redress in the event of abuse of their rights. Most of them are ignorant about their rights and therefore cannot challenge rights abuses even in the court of law. This collaborates with studies byHuman Rights Clinic [20] and Action Aid [7].

Also, the study found that the effects of mining on the people areprofound andvast majority of participants are aware of the negative impact of the activity of the mining in the communities. The Akoben ratings used by EPA which is mandated by law to monitor and assess the activities in mining companies and their compliance with EIA documents confirmed that AGA is performing poorly as their activities environments.It is not surprising that violates supervisory and monitoring officials are aware of the hazards caused by mining. This confirms that the negative effects of mining on the people are well known. These findings are consistent with studies by Kotey and Adusei [21], Yeboah [22], Yelpaala [23], Zarsky [24] and Dias [25]. The studies mentioned that the environmental effects of mining are known to the

people because of the challenges they encounter in their respective communities.

In addition, the results of the study revealed how the activities of mining violate the rights of people in the mining communities. For example, the study revealed that the seizure of land for mining purposes food production have affected in Obuasi Municipality. This might impact negatively on food production within the municipality which could lead to high cost of living among the people. The cost of living in Obuasi and its environs could be high as compared to other places where there is no mining activity. These findings collaborate with studies by Human Rights Clinic [20], Kotey and Poku[21], Vedasto[19], Akabzaa et al [5] and Akabzaa and Darimani[3]. It was found in these studies that the cost of living in mining communities were mostly high due to lack of land for farming activities.

Also, the study found that mining activities have led to denial of the right to work. This is probably as result of the fact that mining activities have taken over lands previously used for farming. This might lead to high rate of unemployment in the communities as farmlands on which the various communities used for farming have been taken over by the company with no alternative employment avenue for the youth especially to get something doing than engage in illegal mining.This finding is consistent with studies by Action Aid [7], Akabzaa et al [5],Akabzaa and Darimani[3], Third World Network Africa [18] and Lassey [26].These studies found that unemployment is high among the youth in mining communities in Ghana.

Furthermore, the results of the study revealed that low compensation were paid to people living in mining communities. This may worsen the living conditions of the people and it is possible they might be unable to support their daily needs. This collaborates with studies by Human Right Clinic [20], Vedasto[19], Yeboah[22], Owusu-Korangteng [10] and Akabzaa and Darimani[3]. These studies found that low levels of compensation payments have exacerbated the poverty in mining communities because companies paid compensation based on commonly used formula of the headcount method of crops destroyed multiplied by historically fixed governmental rates for various crops in an inflationary economy. More so, the study found that the activities of mining affect the health of people living around the mining concession. The finding of the study collaborates with studies by Vedasto[19], Akabzaa et al [5], Owusu-Koranteng[10] Action Aid International [7], Third World Network Africa [18] and Dias (2000). According to these studies, commercial mining is an industrial activity which usually involves blasting, crushing and dumping of waste on thousands of acres of land for one mine. Therefore, the possible

effects to the environment and human health of such operations are enormous and myriad.

CONCLUSION AND RECOMMENDATIONS

In as much as the economic benefits of the mining industry in Ghana is well acknowledged, there is the need also to recognize the human rights abuses that has occurred over the years. Mining, which is an industrial activity, comes with negative impacts, resulting in human rights violations. After a thorough investigation into the operations of AGA in Obuasi and its surroundings, it has come to light that, indeed, mining activities is likely to results in human rights violation of people in the various mining communities. Despite efforts by government agencies and organizations in ensuring that mining activities are carried out on sustainable basis without serious problems to the environment and host communities, the public is yet to feel the impact of their activities. A critical assessment of their activities therefore shows that there is more to be achieved than what has been accomplished so far as human rights abuses are rampant so far as the mining industry is concerned.

After a thorough and lengthy study and analysis of the problems, the study presents the following measures that could be put in place to address human rights violations committed by mining activities. Firstly, mining is a localized activity therefore the local people should be involve in the granting of concessions so that they will be part or have a stake in the operations of the company. In such an event, the companies will be obliged to invest part of their profits into the community to help curb the menace of poverty in mining communities. Secondly, there should be rigorous efforts at re-forestation, resettlement of affected communities and putting in place measures aimed at restoring back degraded lands to its original state after mining activities on the land has been completed. These will not only reduce the negative environmental and health impacts on the people but also would ensure that there are lands available particularly to farmers for agricultural purposes. In addition, employment opportunities will receive a significant boost so as to reduce the high rate of unemployment among the youth with the municipality.

Moreover, mining companies should institute in place training programs aimed at resourcing the local youths in order for them to take part in the economic ventures. The company could train such youths for future employment in their companies in order to ease the high rate of unemployment within the mining communities. Also, there is the need for harmonization between governmental agencies such as environmental protection agency (EPA), Minerals Commission, Municipal Assemblies, Forest Commission and Ministry of Land and Natural Resources so that they can efficiently execute their obligations which will help ease difficulties inhabitants around mining communities encounter due to presence of commercial mining companies.

The government should focus on implementing new mineral policies and begin to strictly push mining companies to adopt better environmental policies as wellstrong commitment to corporate social responsibilities in order to reduce the negative impact of mining. Again, parliament should review the land valuation act to help increase the amount fixed for crops to improve the frequent used head count method. The commonly used headcount method is not the best as the people suffer at the end of the day.

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