THE NEXUS BETWEEN MINING AND SPECULATIVE ACTIVITIES IN GHANA: A CASE OF NEWMONT AKYEM ENCLAVE

By

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DECLARATION

I hereby declare that this submission is my own work toward the MSc. and that, to the best of my knowledge, it contains neither materials previously published by another person or materials which have been accepted for the award of any other degree by this or any other university except where due acknowledgement has been made in the text.

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DEDICATION

I dedicate this piece of work to; my lovely wife –Shirley Tony Kum (Mrs), and my precious daughter and sons: Obaasima Ama Obra Armoo, Osagyefo Kobina Kum and Osaberema Ghantey Panyin Kum. It is also to my Parents who did not live to see this piece mile stone, and all my brothers and sisters especially Lawyer Kojo Kum of Kendicks Law Firm and Madam Francesca Haizel.

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ABSTRACT

The surface or open-cast method of mining being adopted by most companies often results in the acquisition of large tracts of land and the displacement of settlements and infrastructure. According to Section 74(2) of the Minerals and Mining Act 2006, Act 703, in the case of compulsory acquisition of property, prompt payment of fair and adequate compensation shall be made. Host communities in mining areas are always imploring how they can make the most out of compensation for displaced, terminated and destroyed property. Some members of the communities engage in speculative activities in order to secure compensation. The speculative activities include planting of crops and trees 'overnight' as well as erecting structures on parts of the mining concessions areas in the hope that the project would physically impact their investments for compensation. Several authors have predicted that speculative activities could be a source of conflict. However, no scientific evaluation has been carried out to validate this claim. Owing to the above, the researcher adopted a combination of purposive, quota and simple random sampling and sampled 308 Project Affected Households Heads, eight (8) employees of Newmont Golden Ridge, 10 Traditional leader and three (3) regulators to ascertain the nexus between mining and speculative activities in Ghana, using Newmont Akyem enclave as a case study. Data gathered from the respondents analysed using Statistical Package for the Social Sciences (SPSS) software to generate statistical measures and tools such as averages and tables.The finding of the study shows that majority of the PAHs planted tree and erected structures for the purpose of wining compensation form Newmont Golden Ridge Limited (NGRL). These farmers have planted structures crops and erected structures far in excess of what was done. These speculative activities were driven by inter and intra-community information sharing, delay in the acquisition of concession and the fact that PAHs were economically rational. The study affirms that speculative activities, even thou is the most important cause of conflict between mining companies and their host communities. It however, causes conflict between mining companies and their host communities, being only second to the economic ventures and influx of non-indigenes. It is therefore recommended that Newmont and other mining companies alike intensify education via community durbars / fora, community consultations regarding when and how moratorium date is set and the fact that no compensation is paid after that date. The company and other alike must strengthen education on the fact that all aggrieved persons or grievances be referred to the grievance unit for quick resolution to avoid it degenerating into conflicts.

TABLE OF CONTENT

CONTENT

LIST OF FIGURES

FIGURES **PAGE**

LIST OF TABLES

LIST OF PLATES

PLATE **PAGE**

LIST OF ABBREVIATIONS/ACRONYMS

ALPs	Alternative Livelihood Programmes
BND	Birim North District
CEO	Chief Executive Officer
CESCA	Centre for Social and Community Advancement
CNC	Compensations Negotiations Committee
CRRC	Crop Rates Review Committee
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
Li	Legislative Instrument
LRPC	Livelihood Restoration Programme Committee
NADeF	Newmont Akyem Development Foundation
NGGL	Newmont Ghana Gold Limited
OICI	Opportunity International Centre for Industrialization
PAHs	Project Affected Households
PEF	Private Equity Fund
STDs	Sexually Transmitted Diseases

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background of the Study

The ownership of mineral resources is vested in the President and held in trust for the citizens of Ghana. Section (1) of the Mineral and Mining Act, 2006 (Act 703) states: Every mineral in its natural state in, under or upon land in Ghana, rivers, streams, watercourses throughout the country, the exclusive economic zone and area covered by the territorial sea or continental shelf is the property of the Republic and is vested in the President in trust for the people of Ghana. Essentially, Article 257(6) of the 1992 Constitution reads the same (Ayitey et al., 2011). Ayitey et al., (2011), concurred that the state grants these rights to mining companies through concessions or permits. On the other hand, the surface rights to land are publicly and privately owned in Ghana. These surface rights include farming rights, right to build, right to possess and enjoyment of economic trees, both natural and artificial, right to alienate, etc. These surface rights can be derived from allodial interest, usufractural or customary freehold interest, leasehold interest or even lesser interest like 'Abusa' and 'Abunu' system of agricultural tenure arrangement in Ghana. The ownership of any of the interests mentioned above does not include the right to minerals found on or beneath it except where the state is the owner or vested with such interest. The President can, under appropriate legislation, such as State Lands Act, 1962 (Act 125), compulsorily acquire any land for mineral exploitation. Land compulsorily acquired by the state under eminent domain becomes state land. Land can also be acquired through private negotiations for purposes, including mineral prospecting (Ayitey et al., 2011).

Natural law and wisdom require that persons whose properties become displaced in favour of other people's properties must be duly compensated through disclosure of impact and negotiation. The 1992 Constitution (Article 20) provides protection of the individual against deprivation of property without due process and compensation (Ketiboa, 2009). By whichever means land is acquired, the law requires prompt payment of fair and adequate compensation and resettlement of people where the proposed operations would lead to their displacement (Ayitey et al., 2011). Act 703 (Minerals and Mining Act 2006, Act 703) makes it mandatory for mining companies to pay compensation for any property that is damaged by its exploration and mining activities. According to Section 74(2) of the Act,

in the case of compulsory acquisition of property, prompt payment of fair and adequate compensation shall be made. The surface or open-cast method of mining being adopted by most companies in most occasions results in the acquisition of large tracts of land and the displacement of settlements and infrastructure (Manteaw, 2011).

Host communities in mining areas are always imploring how they can make the most out of compensation for displaced, terminated and destroyed property. Some members of the communities engage in speculative activities in order to secure compensation. The speculative activities include planting of crops and trees 'overnight' as well as erecting structures on parts of the mining areas of mining concessions for compensation purposes. Inter and intra-community information sharing has developed so fast in the last few years that communities no longer suffer from ignorance as to how to exploit situations to their advantage (Ketiboa, 2009). According to Ketiboa, (2009), advancement by several communities has contributed immensely to this culture of community information sharing. Civil society organisations are readily on hand to educate the people on their rights, though often without the responsibilities, thus intensifying speculative activities. This speculative business seems to be taking deep roots in the extractive and energy industries and indeed at the inception or construction stage of virtually every project that impacts physically (Ketiboa, 2009). This, among others results in conflicts between affected communities and mining companies (Ayitey et al., 2011). Thus, the need to fully investigate the nexus between speculative activities and mining.

1.2 Problem Statement

Host communities rush to undertake all sorts of investments in crop and structures in the hope that the project would physically impact their investments for compensation (Ketiboa, 2009). In a particular study (an appraisal of the land access processes in the mining industry of Ghana: the case of Newmont Ghana gold limited (NGGL) Ahafo Mine), Manteaw (2011), found that respondents agreed with 96 percent consensus that there are speculative activities in the concession. This was in concordance with what has been reported in the *Resettlement Action Plan Amoma Project* which accordingly states that:" The amount of speculative building recorded in the Amoma Project Area is very significant. NGGL conducted a survey of the Amoma Project Area in July 2007 which recorded only 209 buildings. The asset surveys in the Amoma Project area following the declaration of the Moratorium Date on June 16th 2008, recorded approximately 1,159 structures. These were built prior to and after Moratorium Date. It is therefore estimated

that over 1,000 structures were constructed in the Amoma Project area between August 2007 and August 2008 with the 52 majority of these being constructed just prior to and after the Moratorium Date. Speculative housing in the Area typically is unoccupied, or only recently occupied, with very little land cleared around the buildings.

In finding out whether attempts by speculators to reap undue benefit from the Company could be the source of conflict, Manteaw (2011), reported that 27 percent of the respondents felt it was the source, 62 percent felt to some extent it may be the cause and only 11percent thought it had nothing to do with the controversies that do arise in Newmont land acquisitions. This imply that 91% think that there is a link between speculative activities and conflict. Together with this, it is evident that the way Newmont manages issues relating to speculative activities is paramount in the quest to eliminate community-mine conflict (Manteaw, 2011). This finding appears to be consistent with the view of Aryee (former CEO of Minerals Commission, Ghana), who opined that speculative activities associated with compensation is one of the keys issues or challenges facing the mining sector in Ghana (Aryee, 2010). Ayitey et al., (2011), also share this view.

The term speculative development implies risk – risk of losing some portion or all of an investment. Some speculators misjudge and so several hundreds or thousands of hectares of crops are planted, and tens or hundreds of houses are built. These activities translating into millions of cedis would mean that this scarce resource would have been dumped into the bush because these projects do not fall within the mine take (mine coverage) and so do not attract compensation. At other times, farmers have gone more for teak plant because it is quick growing and it is of high compensation value. The teak cannot be maintained because the farmers only intended it for compensation in the short term. After realising that their teak projects cannot be compensated for because they fall outside the mine take. They will have to be slashed down, but they would have depleted the soil of its productive capacity to a significant extent (Ketiboa, 2009).

The Akyem project of Newmont, has not been exempted from the issue of speculative activities. Community Relation Officers of the company has reported cases of erection of structures in some surrounding communities. This in no doubt has been done with the view of attracting compensation. This implies that a lot more needs to be done in the area of the speculative activities and mining concerns in order to meet the expectations of both parties. Meanwhile current research has not fully explored the issue of speculative

activities among host communities and its possibility to result in conflict between the host communities and mining companies. Current research has focus on the negative impacts of mining on the physical environment and the approach to the compulsory acquisition of the surface rights with little consideration for speculative activities. This obviously, reveals research gab. This is why the study seeks to investigate the nexus between speculative activities and mining.

1.3 Research Objectives

The broad objective of this study is to examine the nexus between speculative activities and mining. To achieve this broad objective, the following specific objectives were to:

- Examine the speculative activities been undertaken by host communities of the Akyem project of Newmont
- Examine the drivers of the speculative activities?
- Investigate the possible consequences of the speculative activities
- Identify the way forward

1.4 Research Questions

- What are the speculative activities being undertaken by host communities of the Akyem project of Newmont
- What are some of the drivers of the speculative activities?
- What are the possible consequences of the speculative activities
- what can be done about the speculative activities

1.5 Justification for the Study

This study is justifiable in that it will help host communities to manage their expectations. It will help both the mining companies and their host communities to prevent waste of resources and foster a good relationship among them. Academic persons with interest in mining can fall on this research as reference and other relevant information. This study is also vital to mining firms in Ghana as well as to investors and potential investors inside or outside Ghana. Decision makers and managers in mining companies can depend on the findings of this work in developing their community relation and communication strategies. This can indeed be significant to many developing countries, because the case study unit (Newmont Golden Ridge Limited) is a multi-national company and many similarities exist between mining firms in Ghana and numerous other developing

countries. Therefore, the significance of this study will extend beyond the boundaries of Ghana.

1.6 Scope of the Study

The study was limited to Newmont Golden Ridge Limited mining activities in the Birim North District whose capital is New Abirem. Specifically it was within the Project Affected Communities (PACs) communities where speculative activities have been sighted; Afosu, Yaayaaso, Adausena, Hweakwae, Ntronang, Old Abirem, Mamanso and New Abirem.

Contextually the study sought to ascertain whether or not a speculative activity is a possible source of conflict between mining companies and their host communities. This study covered among others, some of the potential sources of conflict between mining companies and host communities, drivers of speculative activities among host communities, how speculative activities results in conflict between host communities and mining companies.

1.7 Organization of Report

Chapter One of this study forms the introductory basis for the entire research by outlining the primary guideline of the research. It is composed of: the background to the study, Problem statement, research objectives, research questions, significance of the study and organization of the chapters.

Chapter Two seeks to explore the broad theoretical literature on speculative activities, some of the potential sources of conflict between mining companies and host communities, drivers of speculative activities among host communities, how speculative activities result in conflict between host communities and mining companies among others. The research questions formed the guideline for which this review is undertaken.

Chapter Three embodies the methodology, population / target Population and sample size. It also has the sampling techniques and methods of data collection (Questionnaire, Interview, Focus Group Discussion, etc.).

Chapter Four dealt with the processing, analyses and presentation of the data acquired from fieldwork. The analysis was executed with the aim of answering the research questions set out in Chapter One and the literature reviewed in Chapter Two. Chapter Five covers the summary of the findings, recommendations and relevant conclusions.

1.8 Limitations of the Study

The study encountered some challenges which included limited time to undertake the research and delays in responsing to questionnaires (especially those sent to organizations and those sent by e-mails).

All relevant stakeholders were not covered extensively due to time and resource constraint. However reasonable (representative) number of all key stakeholders (that is traditional authorities, households and employees of NGRL) were surveyed for the study.

CHAPTER TWO

CONCEPTUALISING SPECULATION ACTIVITIES AND MINING COMPANY-COMMUNITY INTERFACE

2.1 Introduction

This chapter reviews relevant literature on speculative activities and mining company-communties interface. It closely examines the following key areas: the concept of speculation, drivers of speculative activities, the possible consequences of the speculative activities and other Potential sources/causes of conflict between mining companies and their host communities. The other causes of conflict apart from speculative activities that was covered under the study includes environmental concerns , small scale mining (Galamsey), economic ventures and influx of non-indigenes, lack of effective communication and discussions, varying expectations of mining development impact and compensation process and adequacy. The conceptual framework of the study is also developed in this chapter.

2.2 The Concept of Speculation

There is never a cohesive definition of speculation (Heisterberg, 2012). In theory, speculation is understood to be investment. Therefore, everything is considered as investment for which assets are used on the basis of a future expectation of achieving profit at a later date. For example, the neo-liberal stock exchange dictionary of the Frankfurter Allgemeine Zeitung defines speculation as follows: in the explicit meaning of the word, an anticipatory action taken in relation to the future with the aim of forestalling future developments in one's own dispositions and achieving an (economic) profit (Wahl, 2008).

Speculation has been defined in in different field and industries. However, generic dimension can be traced among all the definition. For instance land speculation is defined by the major stakeholders in the city who acquire large property with no intention of any investment, but just simply keep it and wait for short or long term for the price to escalate (Fatta, 2014). The term in the aspect of land designates the act where investors who purchase land, keep it vacant without making any improvements to it, in anticipation of future development opportunities (Gaffney, 1994 cited in Triantafyllopoulos, 2010; Evans, 2004). Speculation in the financial market can be defined as the practice of engaging in risky financial transactions in an attempt to profit from short or medium term fluctuations

in the market (Malpezzi and Wachter, 2005). Roche (2009), also defined speculation as the purchase (or sale) of goods with a view to resale (re-purchase) at a later date, where the motive behind such action is the expectation of a change in the relevant prices relatively to the ruling price and not a gain accruing through their use, or any kind of transformation effected in them, or their transfer between markets.

Inherent in the definitions is the intention of the speculator to benefit from price fluctuation. Speculators' expectations are sometimes shaped in an inaccurate way. Thus the speculator can either loose or gain according to the market situation. In an event where prices go up, the speculator may gain. The speculator may also lose if prices go down. For Triantafyllopoulos, 2010, speculation is a method of dealing with the uncertain future. Faced with uncertainty, the speculator adjusts his actions, in order to best accomplish his ends, relative to the expected actions of others and of the physical world. This requires every person not to create the future situation, but to speculate about it and try to understand the future, to think and hypothesise about various probabilities and options.

The definitions also imply that, there is a fundamental difference between investment and speculation. According to Wahl (2008), although a future expectation applies to both as a starting point, their respective logics diverge. Added value is made possible with a real economic investment. A business is established (or an existing one is expanded), and with a successful investment it is capable of extended reproduction through its own means, it is self-supporting and sustainable. The corporate profits are then nurtured by the permanent appropriation of the surplus value. The objective of speculation, however, is to profit from a future difference in the prices of assets. Speculation can occur with commodities as well as with businesses and financial assets. If, for example, a farmer does not place his potato crop on the market as soon as it is harvested, but hoards it for a couple of weeks because he expects that the price will be higher, this is speculation. No real, additional value is created; there is merely speculation on a higher price. Speculation can occur with all kinds of goods. There are, of course, differences in extent depending on the characteristics of the object of speculation (Wahl, 2008).

Chick (1983 cited in Kaltenbrunner, 2011) points out: "there is no reason to limit one's speculation to this kind of asset. In a broad sense, anyone holding an asset with any thought of future re-sale is speculating, taking an open position in something which may gain or lose capital value - as money itself does, in terms of purchasing power, when the price level varies. There are no such limitations on gold, or even black gold (crude oil), for

instance. Speculation with companies occurs via the Private Equity Fund (PEF) business model as well as partially through mergers of companies and take-overs. PEFs buy a company, restructure it in order to then sell it again for a profit after a maximum of five years. There is no interest in future perspectives of the company such as expanding market shares, technological innovation, employment, etc. (Wahl, 2008). Speculation needs only two things: a lively market and sufficient variation in prices to make the game worth playing" (Kaltenbrunner, 2011). Another important feature of speculation is that profits are not only possible with rising prices and rates but also when they decrease. Speculation creates no added value. In contrast to the real economy, gains are not sustainable or self-supporting, but can only be repetitively achieved through new speculation activities. Investment and speculation are also fundamentally different when they fail. When a company goes bankrupt, the fixed assets, the machines, the production procedures, etc., remain and can be used for further wealth creation. When a speculation fails, the assets dissolve into nothing. This is the greatest problem with speculation: the macroeconomic consequences for stability. When speculation has become an important part of wealth accumulation, then the system is highly unstable. Even in times when there is no crisis, volatility has a structural impact (Wahl, 2008).

The foregoing literature shows that, speculation is distinct from economic investment. The basis are that speculation does not necessarily mean value addition and can happen with all forms of assets that has a lively market and sufficient variation in prices. The most important of all speculative initiative is taken with the aim of attracting a reasonable (higher) price for a particular asset in the near future. All this conditions are appropriate for a contextual definition of speculative activities among mining communities. Thus, "speculative activities" among mining communities can be defined as strategic planting of crops and erection of structures in areas that the mine sought to acquire in the hope of securing higher compensation claims. The activities are speculative because, those people do it for the sole purpose of getting compensation rather than normal use.

2.3 Drivers of Speculative Activities

A brief history on speculative activities given by Ketiboa (2009) reveals that the genesis of speculative activities began in the sixties when some roads, the Tema Township, Akosombo dam and many other structures were being built. However, in those times it was the bold, foolhardy and unpatriotic that dared do that. One needed to be bold because the state security agencies including the unofficial ones in the social setting were there to

keep people away. And it was unpatriotic and foolhardy because most development projects were state-owned and even political opponents of the government sometimes acknowledged that such projects were in the national interest, and so all that restrained speculative development somehow (Ketiboa, 2009). Ketiboa (2009), further noted that there was a little bit of speculative activity but largely in cropping during the development of the Tono dam in the present Upper East Region in the nineteen seventies. Since then the phenomenon has become a practice, gained currency and is speedily becoming a business. The Volta River Authority, Newmont Ghana Gold Limited and Anglo Gold Ashanti Limited are, but only a few of the public and private organisations that may have lengths of stories to tell about speculative development (Ketiboa, 2009).

Often, the long development cycles of large-scale projects can mean high levels of initial public awareness and speculation about project development, well before the project has a substantial physical presence. Such speculation raises local, regional, and national expectations of, and interest in, the potential for capturing benefits from the project. Informal communication channels alert the non-local workforce of potential employment opportunities and may exaggerate both the opportunities and the potential benefits (Mares, 2012). People begin to think of how they can make the most out of compensation for displaced, terminated and destroyed property. Informal information sharing among communities has led to communities easily finding means to exploit situations to their advantage. It is believed that in some cases company insiders (employees) supply critical information to speculators to better their investment planning (Ketiboa, 2009). Thus begins a process by which various stakeholders position themselves to take advantage of any real or perceived project-generated opportunities (Mares, 2012). Both local members of the communities and other people from outside begin to strategically plant crops and erect structures in areas that the mine sought to acquire in the hope of securing compensation. This is done in anticipation that when the Company's application for a mining lease is eventually granted they would be able to attract higher compensation claims for the property which they had on the land (Ankisiba, 2013).

In this regard, Ketiboa (2009), realized that the adoption of the ICE model of CESCA (Centre for Social and Community Advancement) by several communities has contributed immensely to this culture of community information sharing and it consequent speculative activities. Civil society organisations are readily on hand to educate the people on their rights, though often without the responsibilities. Citizens of mining communities

beforehand, have knowledge or experience from wherever they may be which results in their rush to undertake all sorts of investments in crop and structures in the hope that the project would physically impact their investments for compensation. These days with community connivance or indulgence, non-citizens from other communities may also come in and undertake such investments directly or get community members to do it by compensation sharing arrangement – a fronting mechanism (Ankisiba, 2013). In the case of housing investment, the additional incentive is that outsider-speculators can either sell or rent out their replacement houses especially if the resettlement is peri-urban. This is the speculative business that seems to be taking deep roots in the extractive and energy industries and indeed at the inception or construction stage of virtually every project that impacts physically. It has been noticed that in many cases of late, as soon as baseline activities are heard of, speculators begin building and planting where ordinarily such activities were not going to be located in the next 10, 30 or more years. They have no idea whether or not the project would come into being. They build and plant in the hope that the project will take off engulfing their investments (Ketiboa, 2009).

The weakness in the current mining law has also been cited to be one of the causes of speculative activities. The mining law does not provide for moratorium (entitlement cutoff date) to be established prior to grant of concession. But the requirements for concession and commencement of project tend to unintentionally, at least, hint prospective speculators that there is an opportunity for economic rent (Ketiboa, 2009). Ketiboa (2009), described it as economic rent because the compensation is only obtainable for investments within the physically impacted area and tend to be far higher than the value that is placed on and obtainable from similar investments not the subject of project compensation. As in the case of Akyem Project of Newmont, the company without mining lease could not have prevented speculative activities from happening. The types of farms and buildings that were established were not the usual practice of farming or building houses in the area. This was only done for the purpose of attracting compensation because experiences from other mining communities showed that compensation paid for these facilities in a mining lease area were often higher than the actual cost of the property (Ankisiba, 2013).

According to Aubynn (2013), in late 1996/1997, they did a survey and identified the people who were living in a particular area because they were going to mine in the area. So the company demarcated a safety zone, they paid compensation for farms and villages which would be affected. Within the next three to four months people started building in

this safety zone so that they could get compensation (Aubynn, 2013). Ketiboa (2009) opined that speculators are aware that replacement houses will be markedly be about 1500 to 2500% higher in value because even if only a single room house is affected, the replacement house must encompass some kind of kitchen, and other facilities of convenience. The stages and levels that are determined for crop compensation coupled with civil society and quasi-political pressures tend to make speculators earn economic rent for their investments. So the foregoing are the incentives that drive the speculative business. And so long as speculative development remains profitable, it goes without saying that it will become more and more entrenched in the socio-economic fabric of this country. But is it all rosy for speculators? (Ketiboa, 2009).

2.4 The Extent of Implementation of the Mining Law by NGRL

Current laws governing mining activities in the country are the Mineral and Mining Act, 2006 (Act 703) and the 1992 Constitution. Under Act 703 before the holder of the mineral right undertakes any activity or operation they must obtain the necessary approval and permits required from the Forestry Commission and the Environmental Protection Agency (EPA) for the protection of natural resources, public health and the environment. The EPA Act, 1994 (Act 490) empowers the EPA to ensure compliance with the environment assessment regulations and to prescribe standards and guidelines relating to the pollution of air, water, land and other forms of environmental pollution. The Environmental Assessment Regulation, 1999 (LI 1652) lists, among others, mining extraction and processing as activities that require a mandatory Environmental Impact Assessment (EIA).Thus, before mining activities take place, the holder of a mineral right (the mining company) must carry out an EIA and submit a report to EPA for approval. These measures are intended to mitigate the adverse effects of mining on the environment, sources of livelihood and the people within the operational area of mining activities. The Act also provides that mineral rights are owned by the state. Section (1) of the Mineral and Mining Act, 2006 (Act 703) states;

Every mineral in its natural state in, under or upon land in Ghana, rivers, streams, water-courses throughout the country, the exclusive economic zone and area covered by the territorial sea or continental shelf is the property of the Republic and is vested in the President in trust for the people of Ghana. Both the 1992 Constitution and the Act 703 give the ownership of any mineral found within the territorial jurisdiction of Ghana to the state. Thus, the ownership of mineral resources is vested in the President in trust for the

citizens of the Republic of Ghana. The state is therefore legally the authority to grant rights to mining companies in the form of licensed concessions and leases (permits).

Furthermore, surface rights to land are both publicly and privately owned Ghana. These surface rights include farming rights, right to build, right to possess and enjoyment of economic trees both natural and artificial, right to alienate etc. These surface rights can be derived from allodial interests, usufructuary or customary freehold interest, leasehold interest and all other forms of lesser interest such as abusa and abunu known under land tenure arrangements in Ghana. Significantly, the ownership of any of the stated interests does not include the right to minerals found on or beneath it except where the state is the owner or vested with such interest. The President can under appropriate legislation, such as Lands Commission Act, 2008 (Act 767) compulsorily acquire any land for mineral exploitation. Land compulsorily acquired by the state under this power becomes state land.

With regards to arrangements for compensation payments when land is taken the state recognises that although mining provides significant socio-economic benefits to the local communities it also can lead to significant negative impacts on the local communities. It has been noted that mining activities can lead to the relocation and in some cases resettlement of local communities and the destruction of farms and property. Thus local inhabitants, often farmers, may be forced out of their homes and sources of livelihood. In accordance with provisions contained in the 1992 Constitution, compensation for expropriated land must be "prompt, fair and adequate". These provisions are also expected to be met under Act 703, which specifically instructs that where any land is compulsory acquired for mining purpose, the owner or lawful occupier must be compensated by the holder of the mineral right. Section 73 (1) of Act 703 states that:

The owner or lawful occupier of any land subject to a mineral right is entitled to and may claim from the holder of the mineral right compensation for the disturbance of the rights of the owner or occupier, in accordance with section 74.

The principles of compensation for mining affected properties are set out under section 74 (1). The Act provides that compensation to which an owner or lawful occupier may be entitled to include:

(a) deprivation of the use or a particular use of the natural surface of the land or part of the land,

(b) loss of or damage to immovable properties,

(c) in the case of land under cultivation, loss of earnings or sustenance suffered by the owner or lawful occupier, having due regard to the nature of their interest in the land and

(d) loss of expected income, depending on the nature of crops on the land and their life expectancy".

The law has also made provision that the amount of compensation payable under the Act 703 shall be determined by agreement between the parties, which is the holder of mineral right and the affected owners. Because of the customary position of chiefs' with regards to stool land negotiations for land compensation are usually between chiefs, who are expected to act in their legal capacity as custodians, and mining companies in Ghana. However, what seemed to be the norm was not the case observed in the BND.

It is common practice in Ghana for negotiations to be done with traditional authorities in respective communities where collective stool land is required for investment. This is so because, as noted earlier, traditional chiefs are expected to act as trustees of stool land. But while individuals and families have usufructuary titles in land, chiefs may negotiate to maximize their personal benefits without considering other interests held in land. As a result sometimes mining companies have been accused of taking land which constitutes a major source of livelihoods for local people in their areas of operation without compensation payments or adequate provisions for alternative means of sustenance.

Although the inhabitants living in the mining affected communities in the BND appeared willing to allow access onto their land for mining they wanted compensation to be negotiated directly with them (rather than through their local chiefs) for the loss of their property rights and assets. This was to ensure that they did not end up being dispossessed of their land and property as studies in other mining communities in Ghana have shown (Akabzaa, 2000; Akabzaa et al, 2007; Tsuma, 2010; Ayelazuno, 2011).

However, if Newmont were to engage in negotiations individually with the mining-affected persons it could potentially have taken a very long time to accomplish and may not therefore have met the statutory requirement for prompt compensation payment. Delayed compensation payment also had the potential to raise anxiety in the communities. Thus, according to the Community Development Manager of the Company as quoted by Akinsoba (2013): "To avert potential delays assessing individual compensations and anxiety Newmont decided to deal with the affected persons, mostly farmers, as a group.

But there were many affected people, over 1000 people so the Company proposed the formation of a committee of representatives to negotiate on behalf of all the mining affected people".

However, the negotiations were expected to be conducted in a way that met the criteria provided by the statutory laws for compensation in Ghana. This necessitated the involvement of officials of the public land sector agencies that regulate land administration, the local government authority of the District, other state institutions and political authorities at the local level. These institutions provided technical advice and guidance in the negotiations process (to be discussed in section 7.3). The idea for a collective process to negotiate compensation as proposed by Newmont led to the establishment of two committees for compensation and for the provision of public goods (the latter committee will be discussed in the next chapter). The proposition made by Newmont was accepted by the people living in the mining-affected communities (and their chiefs) as a process to facilitate land access and compensation to advert potential issues of dispossession of property.

Compensation payments for crops destroyed through prospecting and exploration of mineral activities had been ongoing in the BND before the arrival of Newmont. But this was usually on a small scale compared to the acquisition after Newmont was granted mining lease. There was therefore no formal forum for negotiating compensation payments until 2002, when a committee was first established to negotiate compensation rates. This was officially inaugurated in 2002 by the Regional Minister of the Eastern Region of Ghana. At the time it was called the Crop Rates Review Committee (CRRC) because only crops that had been affected by the Company's mining exploration were entitled to compensation. However, this was subsequently changed to the Compensations Negotiations Committee (CNC) in 2008 in anticipation of the mining lease granted by the State. The change of name also reflected the new scope of the Committee's work.

The CNC was a new concept to be developed and so its establishment in 2008 was preceded by a lot of consultations with the communities. Consultations were held between Newmont and a broad category of people in the local communities which included traditional chiefs, farmers, youth and women's groups. This was first started as a process to create awareness among the local community on the implications and potentials of the mining operations in the district and to help develop the framework for the new system of negotiations. The consultations led to the establishment of working groups based on

specific themes of compensation derived from Act 703 (Gyapong, 2013).

The Akyem project made slow progress from its onset because of concerns raised by Ghana's Environmental Protection Agency (EPA) after completion of its environmental impact assessment; and also from restrictions on projects in forest reserves by the International Finance Corporation (IFC). In the initial stages, when affected communities were made aware of the proposed mine and the effect it would have on their lives, they protested. These protests took place in 2005 and 2006 when they organized processions to provide petitions to the government through the Member of Parliament for the area. The first real issues of conflict broke out in 2005 when a shooting incident occurred between protesting youth and the police resulting in the death of some individuals (Akwetey-Okunor, 2012). On November 2, 2005 two of the farmers who went on demonstration against the Newmont's Akyem mine on compensation issues were shot dead (Vedasto, 2009)

It was until January 19th 2010 Newmont Golden Ridge Limited (NGRL) was granted a Mining Lease by the Government of Ghana and declared a moratorium over a Mining Area granted by the Minerals Commission on the 29th of January 2010 (NGRL, 2014). The granting of the mining lease gave Newmont the legal interest in the land for a 15 year period. By this the Company was obliged to assess and pay compensation for all the items stipulated in the Mining law (Act 703). The fulfilment of this statutory requirement gave the Company the right to enter and clear the land area, which was being used as farmlands and dwelling places for the local community.

Thus, Newmont had no power to stop or intervene in any speculative activities until January 19th 2010. The affected communities by which time had pushed through with their entire plan regarding speculative activities.

2.5 Impact NGRL's Mining Operation on the Live of the Affected Communities

In the Akyem area, Newmont has provided a school, and provided extra medical facilities to the community hospital as part of its CSR initiatives. The aim of the company's CSR initiatives is to collaborate with communities and government to work together in order to minimize the impact of their project and also to create opportunities in these communities. After relocating some of the communities into blocked housing units, the company has also initiated some alternative employment opportunities. Newmont has also developed the Newmont Akyem Development Foundation (NADeF) to enable funding of selected

development projects and educational scholarship schemes (Akwetey-Okunor, 2012).

Compensation payments have been designed to assist mining affected individuals in this case, mostly peasant farmers in the mining areas.The amount paid was done on either weekly or every fort night through a local rural bank (Mponua Rural Bank and Ecobank). It is expected that such compensation sums would be invested in alternative economic ventures to keep these farmers at least at the same welfare levels prior to the loss of their farming based livelihoods. As a result, the Opportunity Industrialization Centre for International (OICI) (an NGO brought to the district by Newmont to build the capacity of the affected communities' towards Alternative Livelihood Programmes (ALPs) and the BNDA instituted Livelihood Restoration Programme (LRP) targeted at those whose land has been affected. These people were taking through training by OICI for sustainable livelihood programme such as batik tie and dye, soap making, etc (Gyapong, 2013).

The Livelihood Restoration Programme Committee (LRPC) comprises of one member each from the District Assembly, Newmont, Traditional Authority, community, with OICI acting as the facilitators. This Committees main duty was to vet those community members on whose land has been by the activities of Newmont. Most of the people under this programme were those people who were compensated about five years ago but did not go through any training and as a result has misuse their monies. So they were being taking through LRP to restore their livelihood, however, this is based on their ability to present a business plan. In addition, the committee also monitors the progress of those on ALPs (Antwi, 2010).

GGL has help to increase employment opportunities for the teeming unemployed youth who hitherto have to engage in peasant farming and hence resulting in low incomes. The difficulty is that most of the mining communities are predominantly rural areas, lacking basic skills required for working in modern mines. It is worth mentioning that, even among the few locals employed in the mines, majority were miners and labourers who performed only manual and menial jobs such as security, drivers, messengers, and the like on the mines thereby falling at the lowest rungs of the job ladder (Akwetey-Okunor, 2012).

It was evident that given the low level of education and low skills available, only a tiny proportion of local inhabitants and indigenes would have had secured jobs on the mines even if these employment opportunities were largely available. In view of this, the

company through its agent, Opportunity International Centre For Industrialization (OICI) has been taking majority of the communities' members whose life will be affected by the mining activities through vocational training in the area of soap making, powder, tie and dye, snail rearing etc, to serve as a source of alternative livelihood for them (Gyapong, 2013).

With respect to trade, there has been a mark improvement, since the mining activities has help to increase the population of the area and hence increase in trading activities especially in the area of foodstuffs like plantain, palm oil as well as construction materials such as cement, concerts blocks, and roofing sheet. In this direction, Newmont has been buying all their materials suppliers from the communities as well as instructing their sub-contractors to also do likewise. With this improvement, it has help to accelerate economic development as it is evident by the number of new shops openings, hotels, restaurants, filling stations, banks just to mention a few. Such development has strengthened the relationships between the communities and the company.

Newmont has taking upon itself to educate community members about the need to use treated mosquito net as well as under taking regular mass spraying of these areas. In addition, the company in collaboration with the security agent has succeeded in driving away these illegal small-scale miners, who are the cause of this problem. Health authorities in the District have acknowledged the increase in the incidence of Sexually Transmitted Diseases (STDs) including Gonorrhea, Syphilis and HIV/AIDS. Infection cases of STDs including HIV/AIDS in the District have been rising steadily since the arrival of Newmont. From only 20 officially recorded HIV/AIDS cases in 2003, the District now records close to 150 as at December 2007. This is based on the high rate of migration on account of gold mines and increase urbanization of hitherto traditional communities in the District (Antwi, 2010).

In this direction, Newmont in collaboration with the District Assembly has been embarking on mass education in the various mining communities to sensitize its members on the need to stay away from illicit sex and the use of condoms. This education takes place whenever the company organizes its monthly fun games in the communities. These fun games are also use to mobilize the youth for communal works; through this the company hope to achieve social cohesion among the various communities (Akwetey-Okunor, 2012).

2.6 The Possible Consequences of the Speculative Activities

Although it is the state that grants mining companies a lease for the use of the land, the companies required the permission of the people as well since they are the lawful users of the land. The Minerals and Mining law in Ghana requires that such lawful users and owners of land which is to be taken for mining be paid compensation. Generally, within mining communities in Ghana compensation payments for land has often negotiated between the mining right holder and the traditional authorities, represented by local chiefs. However, studies undertaken by various scholars have shown how problematic this has been and has often led to dispossession of land and property and conflicts within mining communities (Akabzaa, 2000; Tsuma, 2010, Yankson, 2010, Ayelazuno, 2011 all cited in Aubynn, 2013).

Even though mining regulations allow affected farm owners to be compensated, the system of compensation is seen as unfair and subject to considerable delays. This compensation system contributes to speculative farming on community land acquired by companies for mining purposes in order to receive compensation (Aubynn, E.A., 1999; Aubynn, E.A, 1998a; Aubynn, E.A., 1998b all cited in Aubynn, 2013). Many a times, companies have no legal basis to prevent this from happening, as they may have not acquired the lease to the land. The speculative activities raise logistical challenges to the company as they are done by the hundreds in a short period of time (Mares, 2012). This adds extra cost to the Company's cost for compensation and also could potentially affect the negotiations process (Ankisiba, 2013). The challenge then becomes when and how to establish moratorium date (Ketiboa, 2009) and whether these speculative activities give rights to compensation after the cut-off date (Mares, 2012). According to Opoku-Agyemang (2002), speculative farming ahead of mining operations by some local communities makes it difficult to differentiate between genuine and frivolous complaints," making the compensation payments difficult and problematic. Very often, these generate into clashes between mining companies and communities especially the youth (Manteaw, 2011). People who are affected by some of this situation resort to demonstrations instead of using proper channels that has been laid down to address community grievances.

Opoku-Agyemang (2002), found that some of the local communities have uncompromising attitude with respect to compensation payments. Such an example is the case of AngloGold Ashanti, where the youth in the community recently embarked on a road blockage, blocking all access to the mining area and preventing workers from normal

operations on site on the basis that the company is dragging its feet on the payment of some compensation. They also chased out workers out of site and threatened violence in pursuance of their views of fairness and delay in payments from AngloGold (Mensah and Okyere, 2014). At other times, communities lack understanding of the company's mode and methods of operation, and thus resort to unqualified demonstrations when their grievances are not channeled to appropriate quarters (Aubynn, 2013). In some instances, the speculative activities cause mining companies to develop a negative perception about the "mentality" of people in local communities. The companies perceive that the people want to make fortune from them by all means. Thus, at the times, the companies refuse to listen to them when they have genuine concern (Aubynn, 2013). In its worst form, speculative activities, has often delayed mining projects (Mares, 2012).

There is a problem of exclusion of employees particularly "local local" (i.e. from the area immediately surrounding the mine) from land acquisition and permitting given the issues of 'speculation' and their status in the community (Kemp and Owen, 2013). This is driven by the perception that company insiders (employees) supply critical information to speculators to better their investment planning (Ketiboa, 2009). The finding of Kemp and Owen (2013), reveals that mining company fear that their own employees may leak information on land take to the local community which can trigger speculative activities. Thus, employees are not privy to the land take information. This perception of some mining companies according to Kemp and Owen (2013) averse company–community connection. According to Kemp and Owen (2013) some departmental managers involved in their study explained that while they have partial knowledge of plans related to land acquisition and permitting, even they are not privy to the full details of their mine's plans.

This situation highlights a range of challenges from an organizational and relational perspective. First and foremost, most Community Relation Department practitioners read this exclusion as a vote of "no confidence" by other parts of the business, signalling to them a lack of trust in their department, and its level of professionalism. This practice is considered unneighbourly and reflected poorly on the character of the person, as well as on the company. However, practitioners (employees) tended not to openly question these policies as they believed it would raise questions about their loyalty to the company, which they said was already in doubt given the issues of 'speculation' and their status as a "local local" (Kemp and Owen, 2013).

2.7 Other Potential Sources/Causes of Conflict between Mining Companies and their Host communities

The development of mining has been in Ghana since the 1880s with the mining of gold, diamonds, bauxite, manganese etc. This has brought both development of social infrastructure, road improvement, growth of villages into towns and provision of housing facilities to workers of mining communities to live better (Badu-Nyarko, 2013). However, this has not been done without much controversy and conflict between the mining companies' and the communities where the exploitation of the minerals occurs. It has become glaringly difficult, for mining companies who rely on extensive tracts of land to operate to coexist with indigenous communities whose livelihoods are intrinsically connected to the land they live on (Mensah and Okyere, 2014).

These conflicts normally concern livelihood security, access to resources, ownership, use or degradation, environmental effects, gendered impact, impact on social cohesion and cultural beliefs, human rights violations and distribution of risks and benefits and the „meaning of development (Bebbington et al., 2008; Hilson, 2002, Kemp et al., 2010). Badu-Nyarko (2013), however, attribute this conflict to genuine fears for water quality and quantity, unequal development, poverty, and social vices that may sometimes produce violent conflicts between investors (miners) and the communities in which they operate. Other potential conflicts involve environmental concerns. The relationship between the mining companies and communities have been described as the "battleground" for contesting the operational activities of industry (Calvano, 2008), it is clear that disputes emerge from this interaction. It is a form of interaction where there is enormous power and relational inequality between companies and communities. Companies wield considerable resources (legal, financial) both in size and potency whiles communities are poor and weak with limited impact. Thus people have resorted to publicly opposing mining operations and often resort to violent agitations resulting in deep rooted disputes (Mensah and Okyere, 2014). It has already been establish in the preceding part of this chapter that speculative activities is one of the causes of conflict between mining companies and the local communities. The other causes of conflict as observed in literature are discussed below.

2.7.1 Environmental Concerns

It is known to have various negative effects on the environment and has resulted in conflicts between local communities and mining companies (Donkor, 2012). For instance, in August 1997 the Minister of Mines and Energy in a meeting with the Mine Workers Union at Tarkwa remarked: "the wrath of public outcry against surface mining is not so much that there should not be surface mining at all, what the people are against is the wanton and seemingly uncontrolled destruction of the environment and the economic livelihood of the people through surface mining" (p.7) (Badu-Nyarko, 2013). Similarly, the Daily Graphic of Monday May 18, 1998 reported that some mining companies have created water pollution problems for resettled communities. Some settled communities have no access to adequate farmlands while ancestral homes are lost (Badu-Nyarko, 2004). The Daily Graphic report further stated that the rate and quality of reclamation of destroyed areas are not satisfactory at some of the mines (Badu-Nyarko, 2013).

Burke (2006), on the effects of mining operations, stated that the process of mining operations affect the environments of the mining communities negatively in various ways including creating dust, pollutant leakages from tailings and slag, changes in land use, acid mine drainage and exhaust pollutants. "The social impact of mining on people living near the mine and/or working there is closely linked with these environmental impacts." According to Burke, (2006) around the world, and not only in developing countries, mining operations are viewed as processes that degrade the environment. An article by the United Nations also outlines various negative effects of mining operations such as energy and water consumption; air, water and land pollution; landscape alteration; soil erosion; destruction of river banks and a threat to the health and safety of individuals (United Nations, 2011).

According to Earthworks, it is said that the open pit mines of mining companies end up producing a lot of dust and liquid waste which reside in tailings dams (Earthworks, 2004). In an experiment performed on pollution in the Obuasi Township Down (1977) cited in Akapire (2010) concluded that pollution extended to a minimum of 5-9 miles further away from the Pompora treatment plant. This is an indication that air pollution is a major problem in mining areas due to the mode of ore and other chemicals used at the mines (Badu-Nyarko, 2013). When this happens, they dry up in the atmosphere and create dust for the individuals living around the mine sites. In addition, the increase in the traffic of vehicles around the mines gets more dust in the air and inevitably pollutes the air

(Earthworks, 2004). The metal produced is refined further in a type of furnace called a smelter, in which a very high temperature is used in order to extract a more pure metal. This kind of technology pollutes the air considerably since the air produced contains nitrogen, sulfur, acid rain, lead and greenhouses gases (Earthworks, 2004).

In Ghana, open pit mining has gradually degraded the landscape and the forest cover (Badu-Nyarko, 2013). Obuasi Township Down (1977), found out that the vegetation around Obuasi is being destroyed by large quantities of noxious substances regularly poured into the air. In the first place land and vegetation have to be cleared in order for surface mining operations to go on (Akabzaa & Darimani,undated). "It is estimated that at the close of mining a company would use 40-60% of its total concession space for activities such as citing of mines, heap leach facilities, tailings dump and open pits, mine camps, roads, and resettlement for displaced communities. This has significant adverse impact on the land and vegetation, the main sources of livelihood of the people" (Akabzaa & Darimani,undated). Surface mining also results in deforestation and a decrease in the viability of land for agricultural use (Akabzaa & Darimani,undated). (Donkor, 2012). This renders the land susceptible to erosion and instability of slopes to hills. The lands are also vulnerable to landslides which can cause great damage to man and property. For instance, it is estimated that every year mining and metallurgy release over 13 billion cubic metres of effluents into Peru's water courses. This is a very worrying situation about the potential for adverse environmental impacts and the implications that these will have for livelihood, consumption, wellbeing and health (Badu-Nyarko, 2013).

There are also effects on water bodies such as acid mine drainage. Acid mine draining causes an increase in the acidic levels in rivers and lakes and endangers humans and animals alike (Earthworks, 2004). At times mines constantly dump their toxic waste in water bodies and keep tailings (toxic waste) in dams which sometimes leak (Earthworks, 2004). An occurrence of this was in 1995, when a tailings dam got broken at a gold mine in Guyana and released three billion liters of tailings that were filled with cyanide into the water bodies surrounding it and killed all living things in them (Earthworks, 2004).

Onduku (2001) cites the Environment and Conflict Project document the "environmental conflicts manifest themselves as political, social, economic, religious or territorial conflicts or conflicts over resources or national interests, or any other type of conflict. They are traditional conflicts induced by an environmental degradation". He further stated that environmental conflicts are usually complex in structure and history and to a large

extent impact on public interests and goods as well as non-represented interests like future generations. Furthermore, government policies and land controls including forest reserves have rendered many locals poor at the expense of industrial growth and development. Such tendencies where the people wallow in abject poverty while others enjoy decent and affluent lifestyles while exploiting their resources degenerate hatred and tension. Akabzaa (2000), pointed out that, the advent of large-scale open-pit gold mining with its attendant destruction of large land surface and displacement of settlement is a major source of conflicts between the local people and the mining companies.

2.7.2 Economic Ventures and Influx of Non-Indigenes

Another area of potential conflict is the influx of non-indigenes into the areas of mineral exploitation. These new entrants may bring with them the skills and expertise needed to develop the industry (Badu-Nyarko, 2013). According to Badu-Nyarko (2013), the success of the non-indigenes and service to the industry at the expense of the indigenes that lacked such skills may gradually develop into hatred. This becomes even worse when they begin to acquire landed properties like buildings, commercial ventures and become highly prosperous. This has been the case in places like the Congo and the Niger Delta (Onduku, 2001). Onduku (2001) indicates that the employment policies of the oil companies are lop-sided with the Niger Delta youths always denied. This has created a pool of unemployed youth in the areas. Also as he indicated, the less a people benefit from a system, the less interest they have in the system for their survival.

Mensah and Okyere, (2014) noted that, the distribution of the limited amount of short-time jobs that mining companies are offering also causes additional stir-up in the community. The offered jobs are shared between the interested community members according to the random principle, usually using pieces of paper with a written “yes” or “no” on it, stating whether one got the job or not. The limited amount of jobs and its distribution in the community brings tension and conflicts. The already very limited job market is highly competitive. Especially the youth is expecting the chief to do more about the gloomy job situation. There are many rumors and accusations floating around. Some say you have to pay bribes to company employees to get a job. Others accuse that by far not all casual labor jobs are distributed by a random principle and some handpicking is taking place: “Suddenly you see people working and you don’t know how they were employed” (Mensah and Okyere, 2014). According to Earthworks, there are many mining communities that are filled with people looking for jobs in order to take care of their

families. This includes farmers that have been displaced by the setting up of mines (Earthworks, 2004). Again, most communities' members see the chiefs to be bias in the selection of people for employment in the mines (Antwi, 2010).

In Tarkwa which is located in the Western Region and hosts quite a number of mines, Akabzaa and Darimani, (undated), found a disparity exists in the incomes of the mining company staff, which acts as an advantage to them. For example, the salaries of Ghanaian staff in the mines are indexed to the US dollar, raising their income tremendously above their colleagues in the public sector. There are also expatriates that are paid internationally competitive salaries which create a very wide gap in the various income levels in Tarkwa. These high levels of income have caused the prices of goods and services in the town to increase (Akabzaa & Darimani,undated). The localised inflation brought about by the newly acquired high purchasing power of those involved in the mining, often poses extreme difficulties to those who are not involved in ASM (Hughes and Furamera, 1999). In addition, increased pressure on local services, such as water provision and health, which are in already scarce at best in many remote rural areas of the developing world, poses difficulties and becomes potential sources of conflict between the mining operations and the local, indigenous populations (Heemskerk, 2002). Another issue is that, many of the labor force from income generating activities such as agriculture, are stopped by mining companies who have taken their farming lands away, which reduces food production and result in high food prices (Donkor, 2012).

Also, the influx of people may bring about its attendant social vices such as prostitution, drug usage, increased alcoholism and so on ((Badu-Nyarko, 2013; Earthworks, 2004). For instance, in the Tarkwa Township in the Western region, there are eight mining companies present. These include Gold Fields Ghana Limited, Teberebie Goldfields, Billington Bogosu and Abosso Goldfields (Akabzaa and Darimani,undated). Akabzaa and Darimani (undated), found that as a result of the prevalence of these mining sites, an addictive drug sub-culture has emerged among 'galamsey operators' and prostitutes, most of whom are young people who have migrated. These individuals take these drugs such as cocaine and marijuana, because it is believed that they are able to stimulate the miners to work effectively.

2.7.3 Lack of effective communication and discussions

Sometimes there is an overall absence of clear, reliable, transparent and independent information on the nature of the risks involved as a result of the mining activity. In many instances, long histories of poor corporate environmental practice and of weak state regulation have left communities distrustful of the central government and mining companies (Badu-Nyarko, 2013). That is, proper environmental impact assessment is not performed by the mining companies and even if they were done the direct effects particularly adverse effects were not disclosed to the communities until the unexpected happens. In other instances, the people are uncertain about the gains and losses of gold mining and its feasibility if it should be allowed alluding to the deceiving portrayals by mining corporations (Mensah and Okyere, 2014). In fact, since many of the educated indigenes do not live in such communities they sometimes connive with the mining companies to cover such issues or are bribed. This sometimes happen with the assistance of the educated traditional rulers (Badu-Nyarko, 2004).This is very sever where mining is a new activity. In many instances, the companies and the government refuse to disclose the long term effects of the activity on the community. Also, the absence of a comprehensive communication plan on the activities creates conflicts (Badu-Nyarko, 2013).

Such was the case in Poboya Forest area in Indonesia where the indigenes protested to stop the government and the mining companies from encroaching on their lands and for that matter operating a mine. This is based on the fact that there is no mining activity anywhere that has not been destructive and wanted to know the long term effects on their lives.The end result is agitations by the youth of the communities as the leaders of the Wassa Communities Affected by Mining (WACM) in Ghana and Ijaw youth in the Niger Delta of Nigeria over the years. This is because despite several agitations, demonstrations and discussions government has not heeded to their plight. In Ghana cases can be cited of open pit mines in the Amansie-West District which were left uncovered, abandoned mines, destruction of livelihoods and diseases like malaria and “bululi” ulcer. The interest of the companies is making profits rather than local development (Badu-Nyarko, 2013).

2.7.4 Varying Expectations of Mining Development Impact

One of the critical elements that cause conflict situations is the divergence of opinions on the expectations of mining and development at the local community level. For instance,

Mensah1 and Okyere, (2014), found that communities where AngloGold Ashanti is operating (Obuasi) had high "hopes" of the impact of mining on the development and wellbeing of the local areas. Gold resources have been in the Obuasi area for quite a long time but its role in fostering the development progress of the local people has been questionable. Hence, the realization of foreign investment, the "community-self assessment of financial benefits" as well as corporate promises considerably shaped expectations. The people therefore expected much from the mining companies and the actual realization of social benefits were far below their initial expectations. These benefits in comparison with the environmental impact of mining operations became the "breeding grounds" for potential disputes and conflicts that evolved later in the work of AngloGold Ashanti (Mensah and Okyere, 2014). Mensah and Okyere, (2014), further observed that though Mining Companies assert that these expectations are imaginary and often lie outside their sphere of influence as business entities, they also highlighted the projects that have been developed as part of their corporate social responsibility programs. CSR remains mining company's tool for driving the development progress of their catchment areas. it is however important to recognize that both mining companies and communities place different values of their development actions, initiatives and programs and hence dichotomy of these valuations initiates potential differences (Mensah and Okyere, 2014).

2.7.5 Compensation Process and Adequacy

Many of the issues underlying the dispute between mining companies and their communities is about compensation for loss of farmlands. Though mining companies have the concession right and they can legally acquire land, the law provides for adequate, suitable and reasonable compensation for damage or any loss (Mensah and Okyere, 2014). The most widespread complaints are related to initial exclusion of some communities' members from the processes and procedures concerning compensation. In the case of NGGL, Antwi (2010), observed that compensation decisions were taken in Accra (the capital city) without the concerns of those of the local folks" This was a result of the fact that the community members who were selected to be members of the Community Compensation Committee (CCC) were not people whose land has been affected by the activities of NGGL resulting in the fixing of low prices for both individual and community properties. Mensah and Okyere, (2014), found that some of the mining companies example AngloGold has a bureaucratic process of financial payments and hence follows certain procedures for any payment to be made. The communities on the other want a

speedy processing of their compensation payment. These opposing views have often led to protests and clashes on between the communities and mining companies.

A major contentious issue in the relation between the mining company and the local communities has had to do with adequate compensation payments to the communities to offset the loss of property-mainly farms and residential facilities, affected or destroyed through mining operations (Antwi, 2010). In all Ghanaian communities, there are ancestral places such as shrines, cemeteries and sacred places that bind the inhabitants culturally and spiritually. However, it may become necessary sometimes to have these ancestral areas relocated. This, in most cases, results in conflicts between surface mining companies and their host communities. In instances where such conflicts need to be resolved by paying compensation for the disturbances, it becomes very difficult to quantify and measure the level of discomfort or inconvenience or disturbance caused to allow for fair and equitable compensation. It is often the impression that no amount of money can pay for the cultural and spiritual implications of exhuming bodies or for moving gods (idols) on a mine's concession (Yirenkyi, 2008).

It is usually the case that monetary compensation paid to affected local community persons covers only the crops on the farm and residential structure and not the land per se. Compensations also mainly cover the current estimated value of the crops and not the source of livelihood of the farmers, which have been permanently impaired. According to Kasanga (2002), the formula commonly used in Ghana is the head count method of crops destroyed, multiplied by a historically fixed government rate for various crops in such an inflationary economy. This to him is a major cause of poverty among affected farmers. As a matter of fact, no amount of compensation adequately cater for the loss of valuable agricultural lands, forestlands, wildlife resources and water bodies degraded as well as the growing numbers of people dislocated through mining operations in the district (Antwi, 2010).

2.7.6 Small Scale Mining (Galamsey)

The lack of land for farming and wage employment that would absorb this loss brings the community members to turn to activities they do not favor themselves but see as necessary for their survival. One of those activities is galamsey mining. Mensah1 and Okyere (2014) found that, the rising unemployment issues to the loss of productive farm lands due to the mining activity of AngloGold Ashanti and the negative impact of mining on their land

affected the productive capacity of the land to support farming. As a result of this, many of farmer within the host communities indicate that they had no option but to leave the traditional occupation of farming. With no alternative livelihood avenues, they are left jobless with nothing to support themselves and their families. In effect, they have resorted to illegal mining for daily sustenance.

They turn to compete for the same resources as the mining companies which may fuel complicit between them. Ayling and Kelly (1997) argue that one reason why small-scale mining has a huge potential for land use conflict is because different interests compete for a limited amount of resources, and clear, legitimate rights of access are often lacking. The conflict between small-scale and large-scale mining in Ghana is deeply-rooted; large-scale mining companies argue that they have gone through the necessary legal channels to secure concessions and should therefore have legal entitlement, and indigenous groups and small-scale mining parties maintain that they have cultural ties to land (ILO, 1999). This has further exacerbated hostility between host communities as small- scale miners who experience difficulties finding suitable plots of land that do not form part of a large-scale mining concession, as well as the fact that "there has been a tendency for the government to demarcate unproductive land plots to artisans, which has forced many to encroach onto neighbouring large-scale concessions" (Hilson and Potter, 2005, p. 119).

2.7.7 Disregard for Human Right

There are many instances where mining companies have conducted operations without the consent of the surrounding communities (Earthworks, 2004). When the social impacts of mining companies were studied, a constant pattern of disregard for the right of the community in terms of informed consent in addition to other basic human rights was noticed. Because many local people in rural areas do not have the needed land titles for their lands, they cannot do much when they have to be evicted by a mining company (who has gained a mining lease) even though they might not have been consulted by the company previously or been compensated adequately (Donkor, 2012). In 2001 in Indonesia, the military and company security of Rio Tinto Gold Mining Company of forcefully evicting local small-scale miners and setting other villages on fire between 1989 and 1992 without compensating them, in order to set up a mine (Earthworks, 2004).

One unfortunate thing is that the miners that work in the mines of mining companies are generally treated as a resource that is disposable (Donkor, 2012). With regards to their

rights, though in some countries like Brazil and Zimbabwe labor unions are legal, in others like China and Burma, they are not. However, even in areas where these unions are legal, members are often intimidated or dismissed (Earthworks, 2004). Another aspect is that of safety. Mining is said to be one of most dangerous jobs globally (Earthworks, 2004). In 1996, it was estimated by the then South African Minister for Mineral and Energy Affairs that every ton of gold that is mined costs one life and twelve serious injuries. The International Labor Organization states that even though just one percent of the world's labor force in involved in mining, the industry is responsible for five percent of fatalities that occur on the job. Some of these accidents include tunnels collapsing, fires breaking and rocks falling. All these take the lives of more than 15,000 miners annually (Earthworks, 2004).

2.8 Theoretical underpinning

The study of speculative activities and its ensuing conflict between mining communities is related to a variety of theories. The moral hazard theory is inextricably linked to this study. In economic theory, moral hazard is a situation where the provision of protection against risk (for example, by insurance) gives a party a larger incentive to take risks or commit fraud because they are protected from the full costs of their actions (Steinsson, 2013). For example, a moral hazard occurs when car owners are insured against car theft. As the car owner is insured against car theft, the owner has less of an incentive to take precautions to decrease the likelihood of car theft (Rowlands and Carment, 1998). The car owner may irresponsibly park his car in more convenient, cheaper parking spaces that are less secure (Rauchhaus 2005). Relating to this study, the mining law stipulates that the manning companies should pay fair and adequate compensation to individuals (PAHs) whose properties may be affected by the activities of the mine. The mining company can be said to be the insurer while the PAHs are the insured. The compensation may be referred to as the insurance to be paid to the PAHs when their properties are affected. The insured (PAHs) are motivated to take risk (plant tree and erect structures) aimed at attracting the maximum insurance (compensation) from the insurer (NGRL) by planting and erecting structures. The insurer (NGRL) would want to avoid speculative activities because it shoots up the cost of operation and subsequently reduces profit. This action could possibly results in disagreement between the two parties. Other related theories that explain the actions of the parties in the moral hazard theory include the Game Theory, Pareto Optimality, Market Failures and Externalities.

The Game Theory is a branch of applied mathematics and economics studying human interactions using rules of play and alternate choices (Levine, 2010). The theory of game is a decision situation presented to two or more players whose interests conflict. Each player has available a set of well-defined choices and each combination of choices of play leads to an end-state (win, draw or lose) which furnishes the game. For each play, a possible pay-off is associated with each of the end sates (Kartik N., 2009). A set of rules or laws/principles guide role play in a kind of a game. An example is where a policy on the ban of the importation of pork from a particular country could affect somebody who plays the role of importer of pork. Gaming is aimed at creating the environment for self-instruction where decision is taken on account of available information. The formal modeling approach replicates a social situation specifying player's options, incentives, and information available to determine actions taken to maximize individual returns (Irmischer, 2010). In the case of this study, the players are the PAHs and the NGRL. The actions of the projects affected households are to maximize the benefits from the amount of compensation received from the company for the destruction of their properties. The company (NGRL) on the other hand is to fair and adequate compensation to the PAHs but to avoid a situation where the PAHs take undue advantage from the amount of compensation due them through speculative activities. Equilibrium is reached when the amount of compensation paid is fair and adequate in the sight of both players that is the NGRL and the PAHs. Beside the equilibrium (below or above the equilibrium), any of the players is likely to be unsatisfied which can lead to misunderstanding or possible conflict between the two. The challenge then becomes how to reach equilibrium between the two parties in a real life situation.

An externality rises when one party directly conveys a benefit or cost to others (Kuang-Cheng, 2012). Externalities are a type of market failure. When an externality exists, the prices in a market do not reflect the true marginal costs and/or marginal benefits associated with the goods and services traded in the market (Zilberman, 1999; Perman et al., 2003).). An externality can either be positive or negative. A positive externality arises when one party directly conveys a benefit to others while a negative externality arises when one party directly imposes a cost to others (Thaler and Sunstein, 2009). In the case of this study, speculative activities conveys positive benefit to the PAH and negative benefit to NGRL. Thus speculative activities yield positive externalities to the PAHs and negative externalities to the NGRL in the compensation process. The PAHs always aim at

maximizing the amount of compensation (externalities) due them. This could lead to disagreement and possible conflict between the two parties.

According to Bozeman (2000), the market failure model, was pioneered by Bator (1958) and Samuelson (1954) centers on questions of externalities or spillover effects and, more generally, the ability to set efficient prices for goods and services. Market failure has been defined with respect to a very particular Archimedean Point: the equilibrium that would exist if somehow the assumptions of perfect competition were met (Besley, 2006; Ledyard, 2008). Market failure can be described as a departure from the market equilibrium that would have been obtained in its absence (Krueger, 1990). Keech and Munger, (2012), emphasized that the simple version of the theory has two parts. The first is the presumption that market processes are the default for allocating scarce resources. This amounts to an assumption of perfect competition, where price information will direct self-interested market participants to correct "mistakes," or Pareto-dominated allocations, in resource use. The second part of the theory asserts that when competition is imperfect, the consequent "market failures" can and should be corrected by government. This second claim amounts to an assumption that political actors have both appropriate incentives and accurate information, so that Pareto optimal allocations of resources can be achieved. As indicated before, equilibrium is reach in the process of compensation when both the PAHs and NGRL see the amount of compensation paid as fair and adequate. In the situation where the compensation is unfair or inadequate to any of the two parties, the could be said to have failed.

Pareto Optimality is just an arbitrary way to define efficiency of a welfare state above others (Mongin, 2001). Pareto efficiency is defined by Richard and Peggy (1976), as a given economic arrangement which will leave someone better off without worsening the position of others. Thus any exchange or reallocation of resources is only Pareto optimal if the exchange or reallocation will not harm somebody. A cornerstone of classical economics is the idea that a competitive equilibrium is optimal in the paretian sense that no alternative feasible allocation of commodities can+ improve the lot of one agent without worsening the conditions of some other individual (Golumbin, 2005). An allocation of goods, either input or output goods, is said to be Pareto Efficient if we cannot find a reallocation of those goods such that we can produce more of something (utility or output) without producing less of something else. Also, reallocation of goods that allows more of something to be produced without the sacrifice of something else is said to be

Pareto Improving (McFadden D. et al., 1979). It follows immediately from the definitions above that a Pareto Efficient allocation is one where all Pareto improvements have been exhausted. Pareto efficiency may be thought of as a minimum requirement for a "good" allocation of societies resources, one where all the opportunities to get something for nothing have been exploited.

The implication of the theory in the context of this study is to ensure that no PAHs are harmed by the operations of the mining company. In case where someone is affected, the person would have to be fully compensated. It also means that Pareto Efficient is achieved if fair and adequate compensation is paid to the PAHs.

2.9 Conceptual Framework

Although it is the state that grants mining companies a lease for the use of the land, the companies required the permission of the people as well since they are the lawful users of the land. The Minerals and Mining law in Ghana requires that such lawful users and owners of land which is to be taken for mining be paid compensation. Generally, within mining communities in Ghana compensation payments for land has often negotiated between the mining right holder and the traditional authorities, represented by local chiefs. However, studies undertaken by various scholars have shown how problematic this has been and has often led to dispossession of land and property and conflicts within mining communities (Akabzaa, 2000; Tsuma, 2010, Yankson, 2010, Ayelazuno, 2011 all cited in Aubynn, 2013).

Even though mining regulations allow affected farm owners to be compensated, the system of compensation is seen as unfair and subject to considerable delays. This compensation system contributes to speculative farming on community land acquired by companies for mining purposes in order to receive compensation (Aubynn, E.A., 1999; Aubynn, E.A, 1998a; Aubynn, E.A., 1998b all cited in Aubynn, 2013). Many a times, companies have no legal basis to prevent this from happening, as they may have not acquired the lease to the land. The speculative activities raise logistical challenges to the company as they are done by the hundreds in a short period of time (Mares, 2012). This adds extra cost to the Company's cost for compensation and also could potentially affect the negotiations process (Ankisiba, 2013). The challenge then becomes when and how to establish moratorium date (Ketiboa, 2009) and whether these speculative activities give rights to compensation after the cut-off date (Mares, 2012). According to Opoku-

Agyemang (2002), speculative farming ahead of mining operations by some local communities makes it difficult to differentiate between genuine and frivolous complaints," making the compensation payments difficult and problematic. Very often, these generate into clashes between mining companies and communities especially the youth (Manteaw, 2011). People who are affected by some of this situation resort to demonstrations instead of using proper channels that has been laid down to address community grievances.

Opoku-Agyemang (2002), found that some of the local communities have uncompromising attitude with respect to compensation payments. Such an example is the case of AngloGold Ashanti, where the youth in the community recently embarked on a road blockage, blocking all access to the mining area and preventing workers from normal operations on site on the basis that the company is dragging its feet on the payment of some compensation. They also chased out workers out of site and threatened violence in pursuance of their views of fairness and delay in payments from AngloGold (Mensah and Okyere, 2014). At other times, communities lack understanding of the company's mode and methods of operation, and thus resort to unqualified demonstrations when their grievances are not channeled to appropriate quarters (Aubynn, 2013). In some instances, the speculative activities cause mining companies to develop a negative perception about the "mentality" of people in local communities. The companies perceive that the people want to make fortune from them by all means. Thus, at the times, the companies refuse to listen to them when they have genuine concern (Aubynn, 2013). In its worst form, speculative activities, has often delayed mining projects (Mares, 2012).

There is a problem of exclusion of employees particularly "local local" (i.e. from the area immediately surrounding the mine) from land acquisition and permitting given the issues of 'speculation' and their status in the community (Kemp and Owen, 2013). This is driven by the perception that company insiders (employees) supply critical information to speculators to better their investment planning (Ketiboa, 2009). The finding of Kemp and Owen (2013), reveals that mining company fear that their own employees may leak information on land take to the local community which can trigger speculative activities. Thus, employees are not privy to the land take information. This perception of some mining companies according to Kemp and Owen (2013) averse company–community connection. According to Kemp and Owen (2013) some departmental managers involved in their study explained that while they have partial knowledge of plans related to land

acquisition and permitting, even they are not privy to the full details of their mine's plans.

This situation highlights a range of challenges from an organizational and relational perspective. First and foremost, most Community Relation Department practitioners read this exclusion as a vote of “no confidence” by other parts of the business, signalling to them a lack of trust in their department, and its level of professionalism. This practice is considered unneighbourly and reflected poorly on the character of the person, as well as on the company. However, practitioners (employees) tended not to openly question these policies as they believed it would raise questions about their loyalty to the company, which they said was already in doubt given the issues of ‘speculation’ and their status as a “local local” (Kemp and Owen, 2013). This process of speculative activities leading to conflict is depicted in Figure 2.1.

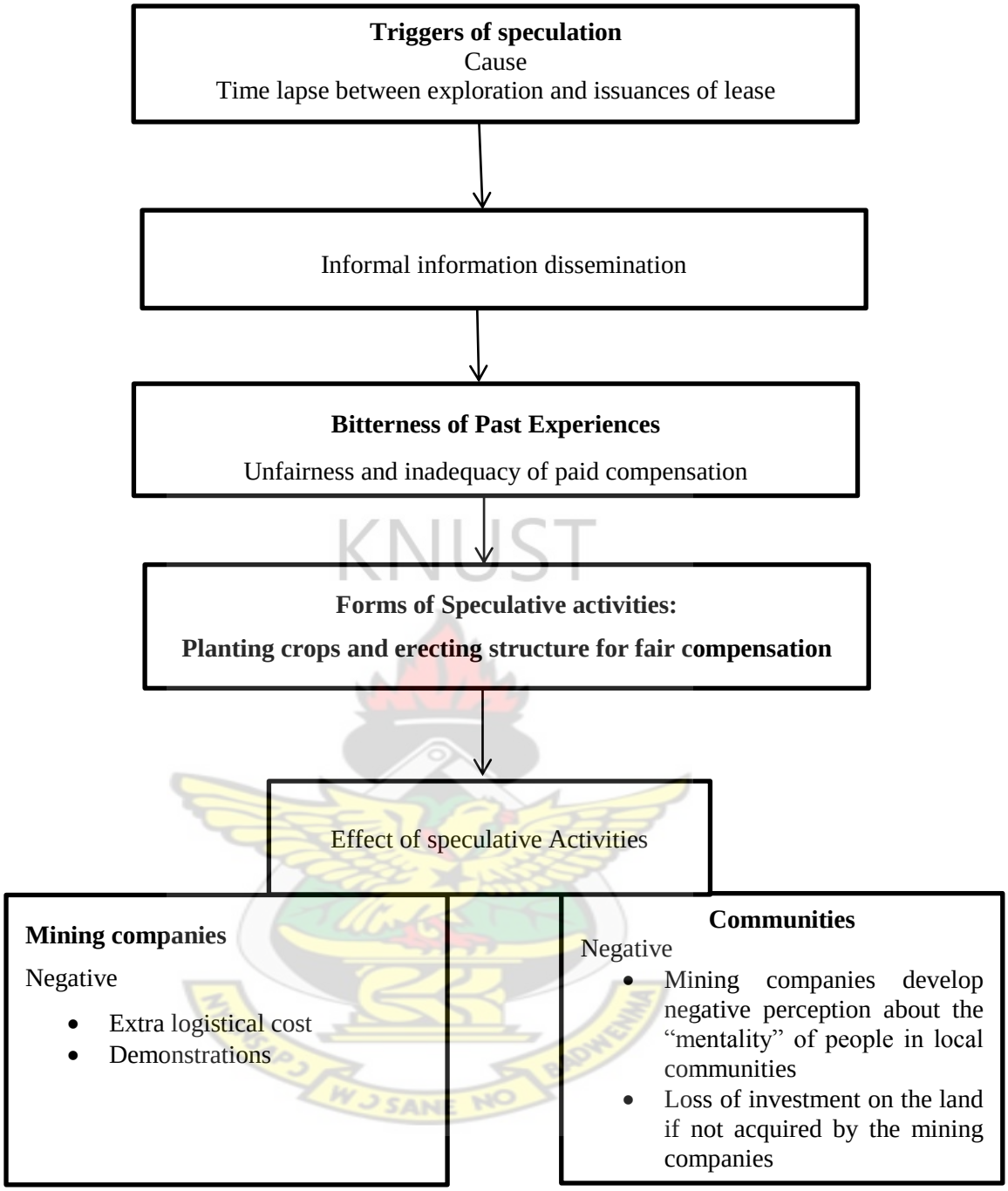

Figure 2.1: Conceptual Framework

Source: Author's construct, 2014

CHAPTER THREE

RESEARCH METHODOLOGY AND PROFILE OF THE STUDY COMMUNITY

3.1 Introduction

The techniques and the procedures that were used to carry out the research have been presented in this chapter. The chapter explains the research design that was adopted, and identifies the data requirements of the research as well as the sampling procedure for data collection and analysis.

3.2 Research Design

A research design in social science is a way of organising a research from inception to maximize the likelihood of generating evidence that provides a warranted answer to a research question for a given level of resources. The emphasis is less on how to conduct the research than on which type is appropriate under the circumstance (Hakim, 2000 cited in Tashakkori and Teddlie, 2010). According to Babbie and Mouton (2007), a research design is a plan or blue print of how a person intends conducting the research. Research design focuses on the end product. What kind of study is being planned and what kind of results are aimed at.

This researcher employed a case study approach. The case study approach was chosen over others because it also provides an appropriate research design well suited to this study where "contemporary event" is examined (Frankfort-Nachmias and Nachmias 1996 cited in Quansah, 2009). According to Yin (1994), a Case study is an empirical inquiry, in which focus is on a contemporary phenomenon within its real-life context and boundaries.

The rationale for using a case study stems from its suitability for both qualitative and quantitative research. A case study research design is appropriate for studies that require in-depth information about a phenomenon within a limited period where a large scale survey may not produce the true results (Bell, 2004). A case study provides the opportunity for an intensive analysis of many specific details that are often overlooked by other methods. It aims at enabling the investigator to grasp and understand a social situation or an issue in order to take decisions in consideration to the special and peculiar circumstances surrounding the case in question. It is thus a critical systematic examination into the circumstances and factors that result in a particular condition, situation, occurrence or event (Kumekpor, 2002).

The preference for the study research design is based on the fact that it is most appropriate for establishing whether speculative activities contribute to conflict between mining companies and their host communities. It also stem from the fact that the phenomenon been studied that "speculative activities" is a contemporary one and the method been employ is both quantitative and qualitative (mixed method). The researcher is also limited by time, thus, employing a case study will provide the opportunity for an intensive analysis of nexus between speculative activities and mining (that is, whether speculative activities causes conflict between mining companies and their host community) that have often been overlooked in other studies.

3.3 Research Method

According to Tashakkori and Teddlie (2010), what all standard research design and variant have in common is that they do not specify the kind of data to be used or collected. Tashakkori and Teddlie (2010) added that at the level of individual study, the research design use by social scientist will be independent of, logically prior to the method of data collection and analysis. A good intervention for example could and should use a variety of data collection techniques (Creswell, 2003)

The research adopted the mixed method. The mixed approach of research design refers to the combination of qualitative and quantitative strategies for the collection and analysis of both forms of data (Tashakkori and Teddlie, 2010). According to Tashakkori and Teddlie (2010), mixed methods are not a design, but just a description of how most people would go about researching any topic they wanted to find out about. The strength of this approach is that, the biases inherent in one could neutralize or cancel the other methods (Creswell, 2003). According to Tashakkori and Teddlie (2010), the mixed method when employed can result into a full representation of phenomenon. Mixed method encourages holism, which more richly, automatically, and appropriately represents the true complexity of behaviour as they occur in natural science context (Johnson et al., 2005; Tashakkori and Teddlie, 2005; Weisner, 1996; Toshikewa, et al, 2008, all cited in Tashakkori and Teddlie, 2010). The complementary nature of qualitative and quantitative methods employed simultaneously or sequentially, is for a great value, in bringing a wider range of value to strengthening and expands our understanding of a phenomenon.

Three strategies can be identified under the mixed approach (Creswell, 2003). They are; the sequential procedure, in which the researcher seeks to elaborate the findings of one

method with another method. The second is the concurrent procedure, in which the researcher converge qualitative and quantitative data in order to provide a comprehensive analysis of the research problem. The third is the transformative procedure, in which the researcher uses theoretical lens as an overarching perspective within a design that contains both qualitative and quantitative data.

The research makes use of the concurrent procedure of the mixed method as it allows the investigator to collect qualitative and quantitative data at the same time during the study and then integrate the information in the interpretation of the overall result. Thus both qualitative and quantitative data on the nexus between mining and speculative activities the same time during the study and integrated to produce the findings of the study.

3.4 Data Collection Methods/Techniques

In order to enhance the quality and diversity of data to appropriately answer the research questions, secondary and primary data were collected. The secondary data was obtained through a review of books, journals, reports, dissertations, official documents, the internet, newsletter articles and published and unpublished. The secondary data was used in defining the concept of speculation, establishing drivers of speculative activities and the possible consequences of speculative activities. Again, the secondary data was used to identify other possible causes of conflicts between mining companies and their host communities as well as developing a conceptual framework of the study.

The primary data was gathered through the use of structured questionnaires which were administered among households and traditional authorities in communities around the Newmont Akyem Project as well as employees of Newmont. The questionnaires were administered with the help of some research assistants. The research assistants were trained to ensure that they fully understood the purpose of the research and that they were able to interpret the questions and administer the questionnaires. The questionnaires were complemented by observation and personal interviews with the respondents.

3.5 Key Variables of the study

In this research, variables measured includes; drivers of speculative activities, consequences of speculative activities, causes of conflicts between NGRL and local communities, RII scores for the various causes of conflict and correlation co-efficient of the ranking of the causes of conflict (see Table 3.1)

Table 3.1 Research Variables

S/N	Variable	Definition	Purpose	Unit of analysis
1.	Drivers of speculative activities	This refers to the various factors that influence the local communities into planting and erection of structure for the purposes of winning a higher compensation	Knowledge of the drivers of speculative activities will help know why and how people undertake speculative activities	PAHs, Traditional Authority, employees of NGRL and MDAs
2.	Consequences of speculative activities	This refers to the effect of speculative activities on NGRL and the local communities in term of their relationship	Knowledge on the consequences of speculative activities will help establish whether speculative activities can actually cause conflict between NGRL and the local communities	PAHs, Traditional Authority, employees of NGRL and MDAs
3	Causes of conflicts between NGRL and local communities	This refers all factors including speculative activities that results in conflict between NGRL and the local communities	This will help to knows various factors that causes conflict between NGRL and the local communities	PAHs, Traditional Authority, employees of NGRL and MDAs
4	RII scores for the various causes of conflict	This refers to the scores (between 0 and 1) associated with the various causes of conflict	Knowing the RII scores will help establish the major causes of conflict between NGRL and whether speculative activities are part of the major causes of conflict	PAHs, Traditional Authority, employees of NGRL and MDAs
5	Correlation co-efficient of the ranking of the causes of conflict	This refers to the strength of the linear association between the ranking of the causes of conflict by the various group of respondents	This will help to know whether the ranking by the three group of respondents agree or not	PAHs, Traditional Authority, employees of NGRL and MDAs

Sources: Author's Construct, 2014

3.6 Sampling Design

Sampling designs comprise two major components: the sampling scheme and the sample size. The sampling scheme denotes the explicit strategies used to select units (e.g., people, groups, settings, and events), whereas the sample size indicates the number of units selected for the study (Collins et al., 2007). The sampling design adopted for the study is discussed below.

3.6.1 Sample Units

It is the analysis you do in your study that determines what the unit is (Trochim, 2006). Selecting the unit of analysis is very important to help identify the relevant information to be collected. Without the unit of analysis, you may be tempted to collect and compare too much information. The more the case study has a well-stated research question and answer combined with a defined unit of analysis, the more it will stay within feasible limits for a masters' level research (Yin, 2013). Straydom (2005), defines sample units as comprising elements of the population considered for actual inclusion in the study or as a subset of measurements drawn from a population in which we are interested.

The primary data required to answer the research questions of the study were gathered partly from employees of NGRL particularly the Community Development, Community Relations and Land Access Units of the Environment and Social Relations Department. These three units were chosen due to their close contact with the various communities and the fact that they are aware of the various development including speculative activities among the communities. Traditional authorities and households in the five communities; Afosu, Yaayaaso, Adausena, Hweakwae, Ntronang where speculative activities have been spotted also formed part of the unit about whom information needed for the study were gathered. They employees from NGRL, Traditional authorities and household from the aforementioned communities formed the unit of analysis for the study.

3.6.2 Sampling Scheme

The research adopted a combination of purposive, quota and simple random sampling approach in the case of the sampling scheme.

The project affected communities (Afosu, Yaayaaso, Adausena, Hweakwae, Ntronang, Old Abirem, Mamanso, New Abirem), the employees of NGRL, MDAs and Traditional authorities within the project affected communities were identified as major stakeholders in the study. This is because the project affected communities are the areas where

speculative activities have been spotted and the above mentioned stakeholders have various degree of interest in the speculative activities among the project affected communities while their inclusion in the study will enrich the findings.

Proportional quota sampling was used in the determination of the required sample of the number of project affected households to be included in the study. The basis of the quota was restricted to NGRL's policy on the proportional distribution of employment opportunities among the affected communities. This policy is informed by the degree of impact of the project on the various communities.

However, in administering the questionnaires to the sample units of analysis, purposive and simple random sampling methods were used. Simple random sampling was used in selecting the project affected households from the defined communities while Purposive sampling was used in selecting all the other stakeholders. In the simple random approach, any of the project affected household within each of communities who was available as at the time of the survey was interviewed until the sample size as per the various communities was reached. In the purposive approach, key stakeholders with valuable knowledge on speculative activities were interviewed.

3.6.3 Determination of Sample Size

Calculating the adequacy of probabilistic sample sizes is generally straight forward and can be estimated mathematically based on preselected parameters and objectives (Guest et al, 2006). The views of Guest and others only hold if there exist available sample frame from which sample can be drawn. According to environmental Impact assessment report (EIS) NGRL on the Akyem projects, the Proposed Mining Area supports 1,685 households. Applying the formula of Slovin (1960 cited in Vedra, 2013):

$n = N/(1+Ne^2)$,

where:

N is the population size = 1685 project affected households

e is the margin of error – percent allowance for non-precision = 5%

n is the sample size which determined as 323.42 project affected households

The above sample size is distributed among the various communities by the NGRL policy on the proportional distribution of employment among the communities (see Table 3.2).

The number of the various stakeholders (employees of NGRL, MDAs and the Traditional Authorities are purposively determined since the sample frame for this institutions is difficult to come by (see Table 3.2). The choice of the case study approach as the research design for this study therefore presents a margin of flexibility in dealing with these sampling frame challenges as according to Taschereau (1998), there are no rigid rules for selecting a sample size when dealing with case studies. This results from the fact that the validity or otherwise of the research findings has more to do with information richness of the cases selected and more so on the credibility of what the researcher wants to investigate and the resources at his disposal than on the sample size selected. In the light of this, one (1) each of Traditional Authorities from the various communities, was included in the study. Nine (9) employees of NGRL, three each from the Community Development, Community Relations and Land Access Units were purposively selected for inclusion in the study. Among the MDAs the District Chief Executive, Coordinating Director and Planning Officers (regulators) and of the Birim North District was included in the study. These groups were seen to have closer contact with the various communities and project affected households. They were therefore in the position to provide valuable information needed enrich the findings of the study.

Table 3.2: Sample Size

Project Affected Communities	Proportion based on Newmont Policy	Sample Size (Head of Households)
Ntronang	0.1 of 323	32
Hweakwae	0.17 of 323	55
Adausena	0.25 of 323	81
Yaayaaso	0.1 of 323	32
Old Abirem	0.04 of 323	13
Afosu	0.11 of 323	36
New Abirem	0.16 of 323	52
Mamanso	0.07 of 323	23
Total	1	323

Source; Author's construct, 2014

3.7 Data Collection Instrument

The study adopted a case study approach where of structured questionnaires, direct observation, a (photographic) camera and a pocket notebook were used as an instrument for data collection. Towards that end, a questionnaire was developed. The questionnaire encompassed a set of close and open ended questions administered through simple random sample. The questions were designed to cover the scope and objectives of the research.

The questionnaire was structured to incorporate lessons from literature review. The questions was clear and straightforward in four important aspects; simple language, common concepts, manageable tasks and widespread information. So, the questionnaire was designed in a simple tablular format that requires the respondent to tick their answer in the appropriate box so as to save time when answering the questions. Photography was used to capture the speculative structure that has been erected by the local folks in order to reinforce the findings of the study.

3.8 Method of Data Analysis and Reporting

The data obtained from the study were in numerical or quantitative (that is, in the form of numbers) and qualitative forms. Hence the report contains both qualitative and quantitative analysis. In both cases the first step towards the analysis was crosschecking to ensure reliability, accuracy, completeness and consistency. A validity check of the data was conducted to identify inconsistencies within each data collection instrument, unreasonable entries and impossible entries. Field data resulting from this quality procedure was then be processed and analyzed using Statistical Product for Survey Solutions (SPSS Version 16.0) to generate information that will be presented by inferential and descriptive statistics. The results and data interpretation will provided within the framework of the set survey objectives.

With regards to the qualitative data, all the information obtained from the participants, were gathered together. The items of information (e.g. statements) was then gathered and arranged into various groups in a preliminary way. If a given item seems relevance to several groups, it was included in all of them. An account of the categories or groupings suggested by the participants themselves was taken. The final step was to form a set of categories based on the information obtained from the previous steps. This included tabulations, percentages, calculation of averages and the drawing of graphs to show the appropriateness of the data to the problem under investigation.

The statistical method used in analyzing the data obtained from the respondents is the relative importance index (RII). The RII was used to rank factors that causes of conflict between the mining company and the host communities taking speculative activities into consideration. Spearman's rank correlation coefficient was also used to test the agreement between the ranks of the observations by the different groups (traditional authorities, households and employees of NGRL).

The questionnaire development incorporated all the causes of conflict between mining companies and their host communities as have been identified in the literature review. The questionnaire was then organised in the form of an importance scale. Respondents, were asked to indicate by ticking a column, the relative importance of each of the causes of conflict on a scale of 1-4 where: 4 = 'very important', 3 = 'important', 2 = 'somewhat important', 1 = 'not important'.

The relative importance index, RII, was computed for each cause of conflict to identify the most significant causes in term of ranking. The RII was computed by the following formula (Fagbenle et al., 2004 cited in Fugar et al., 2010):

$$RII = \left(\frac{\sum PiUi}{N(n)}\right)$$

Where:

RII = relative importance index

Pi = respondent's rating of cause of conflict

Ui = number of respondents placing identical weighting/rating on cause of conflict

N = sample size

n = the highest attainable score on cause of conflict

These rankings made it possible to cross-compare the relative importance of the causes of conflict as perceived by the three groups of respondents (that is, traditional authorities, households and employees of NGRL). From the ranking assigned to each cause of conflict, it will be possible to identify the most important causes of conflict between mining companies and their host communities. This will help establish whether or not

speculative activity is a major cause of conflict.

It is always essential to check accuracy of collected data by statistical methods (Megha and Rajiv, 2013). In this research, ranking of the causes of conflict by various respondents was checked as per Spearman's rank correlation coefficient. In order to test the relative agreement between the responses from different groups (traditional authorities, households and employees of NGRL), the ranks of the calculated RII weights corresponding to the causes of delay was analysed using the Spearman's rank correlation method. Correlation is a relationship measure among different parties or factors and the strength and direction of the relationship. The correlation coefficient varies between +1 and -1, where +1 implies a perfect positive relationship (agreement), while -1 results from a perfect negative relationship (disagreement) (Assaf and Al-Hejji, 2006). The value near to zero indicates little or no correlation. It is a measure of association that is based on the ranks of the observations and not on the numerical value of the data (Megha and Bhatt, 2013). They compare medians rather than means and, as a result, if the data include one or two outliers, their influence is excluded (Fugar et al., 2010).

This correlation was used to find out the degree of agreement between parties. The correlation is computed by the following formula (Assaf and Al-Hejji, 2006):

$$r = 1 - \frac{6\sum d^2}{n^3 - n}$$

Where:

d = the difference between the ranks given by any two respondents for an individual cause and

n = the number of causes.

3.8 Profile of the Study Area

3.8.1 Location and Profile of the Study Area

Birim North District (BND) is located in the Eastern Region and represents one of twenty-one districts in the region. Until 1987 Birim North was formerly part of the Birim District before it was carved out as a separate district as part of the Government of Ghana's programme of promoting decentralisation and development in the country. Population for the district is estimated at 78,907 living in about 89 communities. There are not many

towns within the district that have a population exceeding 5000 people. The administrative capital town of the BND is New Abirem, which is located approximately 180km North-West of Ghana's capital city Accra (Ankisiba, 2013). The District has large quantities of gold in the Southern part around Ajenjua Bepo surrounded by Ntronang, Afosu, Adausena, New Abirem Yayaso Hweakwae communities. Newmont Golden Ridge Limited (the "Company"), a subsidiary of Newmont Mining Corporation, is proposing to mine gold reserves at the Akyem Gold Mining Project (the "Project") site in the Birim North District of the Eastern Region of Ghana, West Africa (Figure 1-1). The Project is located approximately 3 kilometres west of the district capital New Abirem, 133 kilometres west of Koforidua the regional capital, and 180 kilometres northwest of Accra. NGRL is a mining company with legal interest as a leaseholder, to exploit and invest in mining on stool land in the BND. As a result of this it was identified as important actor with regards to land relations and development in the communities studied. Both NGRL and Newmont Ghana Gold Limited, Ahafo Mines (NGGL), are Ghanaian subsidiaries of Newmont Mining Corporation based in Denver, Colorado in the United States of America (USA). Whereas NGGL has been actively producing gold at its mines at Ahafo, in the Brong-Ahafo Region of Ghana since 2006, NGRL has been exploring for gold and assessing development opportunities at Akyem, in the Eastern Region of Ghana since 1997. In 1997, three companies, La Source SAS, Gencor, and Kenbert Mines undertaking mineral exploration in the Birim North District formed Golden Ridge Resources Limited. La Source subsequently acquired Gencor's interest increasing its holding in the Company to 80 percent. In 1999, La Source transferred its share in the Company to Normandy Ghana Gold Limited. In 2002, Newmont acquired Normandy and an additional 5 percent of Kenbert Mines Limited shares to increase its holding in the Company to 85 percent. In late 2005 Newmont moved to 100% ownership when it acquired the remaining Kenbert shares. In 2008, the name of the company was changed to Newmont Golden Ridge Limited (NGRL) (Ankisiba, 2013).

As a result of mineral exploration in the BND since 2002 and subsequent discovery of commercial quantities of gold reserves NGRL applied for a mining lease from the Government of Ghana to enable it operate a surface mine within the mining enclave of BND. The land which contains the minerals is stool land and is being used by the local communities within the district for agricultural purpose. Various interests and rights are held in the land which the mine project will affect when the mining lease is granted. In

2010 the Government of Ghana granted a 15 year lease to Newmont to operate a surface mine in the district. This followed the approval of the mine Environmental Impact Assessment (EIA) by the Environmental Protection Agency (EPA). The process of assessing the impact of the mining on local community people and businesses included a public hearing attended by all the local chiefs and people from the communities within the districts that are anticipated to be directly affected by the mine project. These are called Project Affected Communities (PAC). Based on the plan and report that Newmont presented for the EIA the local communities showed support and Compensations Negotiations Framework, June 2008 (Ankisiba, 2013). This was then known as the Birim District, until 2008 when the district was split into two; the Birim North and Central. The project commenced production in late the third quarter of 2013. It is estimated that the project has gold reserve of 7.2 millon ounces (Manteaw, 2011).

Eight communities (Afosu, Yaayaaso, Adausena, Hweakwae, Ntronang, Old Abirem, Mamanso and New Abirem) which were selected to constitute a set of case studies for this thesis are within the same geographical location of the BND (see Figure 3.2). They are under the administrative jurisdiction of the BNDA, which has the responsibility of planning development in all these communities. The communities lie within two (out of four) area councils in the district; New Abirem, Old Abirem and Afosu falls within the Abirem and Afosu Area Council while Adausena, Ntronang, Hweakwae and Yaayaaso are in the Praman Area Council.

New Abirem and Ntronang are relatively two big towns in the district that are experiencing a high influx of activities peculiar to urban and peri-urban areas in Ghana due to ongoing mining investments in the district. Thus the commercialization and conversion of land from agricultural to non-agricultural uses is on the ascendency in these towns. Although Adausena is a relatively small community, compared to New Abirem and Ntronang, its inhabitants are the most affected by the ongoing mining activities. This is because the core of mining activity is located on land that belongs to the Adausena stool (located between New Abirem and Ntronang (see Figure 3.2). Adausena together with Ntronang are the two communities that have large tracts of arable and forested land affected by the large scale mining investment in the District.

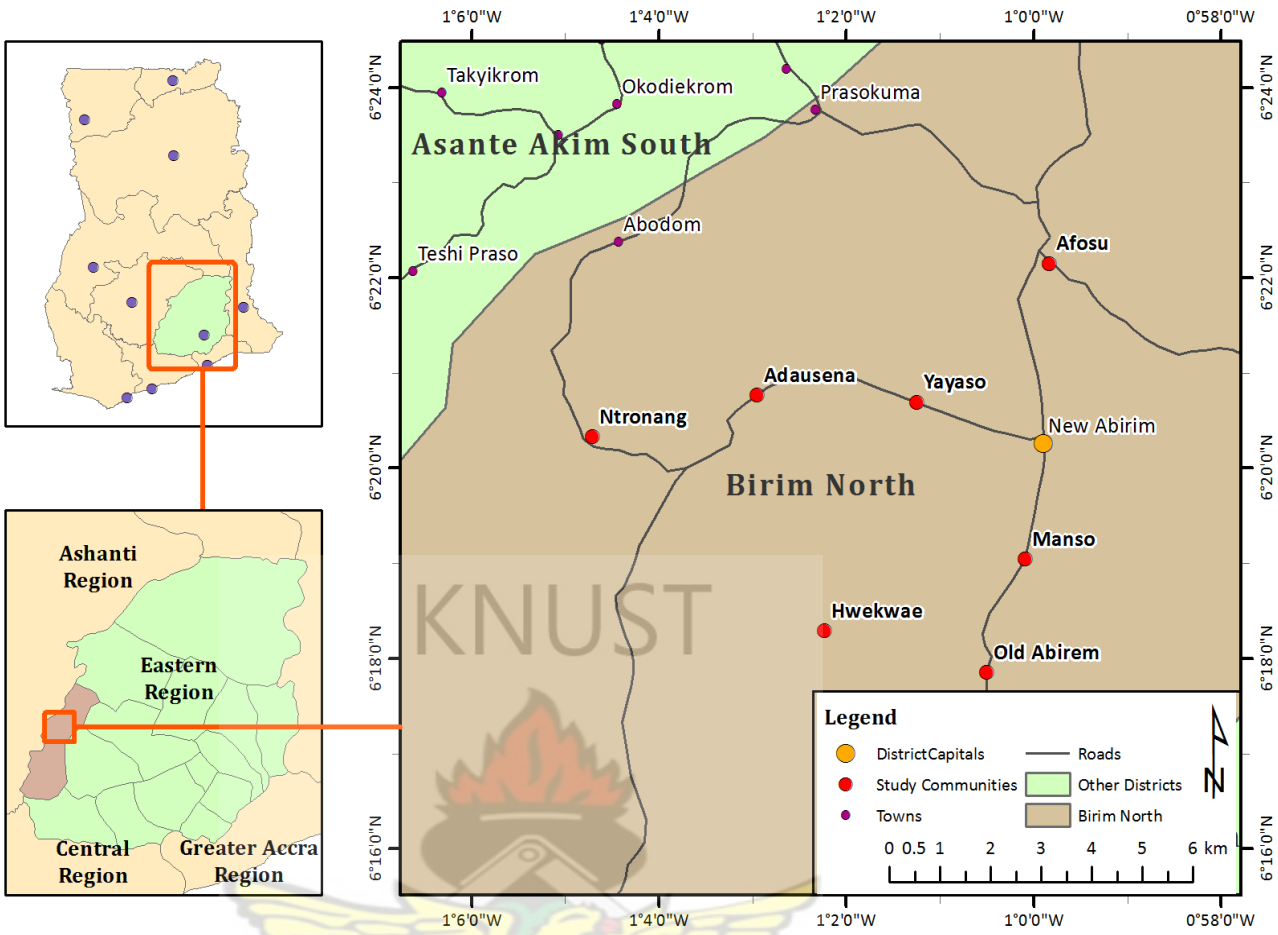

Figure 3.2: Project Location Map

Source; Antwi, 2010

3.8.3 Profile of Traditional Authority

The main ethnic group in the BND is Akan comprising mainly of Akyems who are predominantly from the Eastern region. There are three main divisions of the Akyems; these are the Kotoku, Abuakwa and Bosome. Thus, there are three traditional areas in the district one of which is Akyem Kotoku. The people of BND are mainly Akyem Kotoku constituting about 85% of the Akyem population. Four main stool lands (New Abirem, Adausena, Ntronang and Afosu) have been affected by the mining operations. The highest traditional authority is in chieftaincy which is organized in a hierarchical order with the paramount chief at the top. That authority is located at the headquarters of the Akyem Kotoku people at Oda. As is typical of the Akan militarised chieftaincy structure there are five heads of divisions under the paramount chief to which all the subordinate chiefs and people in the Akyem Kotoku division belong.

The Akyem Kotoku state (Oman) constitutes one traditional area headed by the Paramount chief (Omanhene) who is the head of the Traditional Council of the area. Below the Paramount Chief there are a number of divisional and sub-divisional chiefs (Ahene) who head and represent traditional towns and villages. For instance, the chief of New Abirem (capital of the District) is a divisional chief of the Akyem Kotoku traditional area, who also has sub-chiefs at the village and community levels. Within the District, the paramount chief of the traditional area exerts control over the divisional and sub-chiefs of the area and even over lands in the area in accordance with the customary practices of the people. In some parts of the district migrants have acquired the allodial interest through alienation and are now land owners in those areas. All these traditional authorities play important roles as custodians over land and natural resource management (Ankisiba, 2013).

CHAPTER FOUR

ANALYSIS OF THE NEXUS BETWEEN SPECULATIVE ACTIVITIES AND MINING

4.1 Introduction

The chapter covers the analysis of data gathered from sampled PAHs, traditional authorities/regulators and employees of NGRL. The analysis starts with the background of the respondents and proceeds in the order of the objectives set for the study. A total of 323 questionnaires were sent to the PAHs, 13 to traditional authorities/regulators and nine (9) to the employees of NGRL in accordance with the sample size estimated for study. The questionnaires were administered in person with the help of some survey assistants. In all 308 questionnaires, being 95 percent responsive rate for PAHs, 13 being 100 percent responsive rate for traditional authorities/regulators and seven (8) being 89 percent responsive rate for employees were attained. The background of the respondents is discussed below.

4.2 Background of the Respondents

4.2.1 Respondents' Resident Communities

As have been presented in Table 4.1, the PAHs were sampled from the respective communities in accordance with the estimated sample size of the study. The Table 4.1 shows the number and percentage of sampled respondents from each of the project affected communities. The proportion of the sampled population was informed by the Newmont's policy for distributing of benefits among the affected communities. Implied in the policy is the Population Factor (10 percent), Equity Factor (10 percent), Social and Economic Interests (50 percent) and Stool Land Impact (30 percent). This means that the sample is widely spread across the affected communities. That is the community with the largest population had a largest sample size which implies that the sample is representative of the population.

Table 4.1: Respondents' resident communities

Project Affected Communities	Frequency	Percentage (%)
Ntronang	30	9.7
Hweakwae	53	17.2
Adausena	79	25.6
Yaayaaso	30	9.7
Old Abirem	11	3.6
Afosu	34	11.0
New Abirem	50	16.2
Mamanso	21	6.8
Total	308	100

Source; Field survey work, 2014

4.2.2 Demographic Characteristics of the Respondents

Table 4.2 shows that, majority (72.2 percent) of the project affected household heads involved in the study, were between the ages of 18 to 45 years as against 11 (84.6 percent) of the traditional authorities and regulators who were also between the same age group. Another 60 (19.5 percent) of the project affected household heads were between the ages of 46 to 60 as against 2 (15.4 percent) of the traditional authorities and regulators who fall within the sage age bracket. Among the employees involved in the survey, majority (62.5 percent) were between the ages of 18 to 45, implying that the employees are relatively younger as compare to the other groups involved in the survey. The data on age shows that subjects are matured adults whose reasoning level as regard speculative activities is expected to be high and thus facilitate reliability and validity of the findings. With regards to gender, 212 (68.8 percent) and 96 (31.2 percent) of the PAHs were males and female respectively as against 10 (76.9 percent) and 3 (23.1 percent) of the traditional authorities/regulators who were males and females. The data on gender shows that there were more males than females involved in the study. This data is in line with the general assertion that ownership of land as per customary arrangement is dominated by males. FAO (2011), studies on women and sustainable food security confirm that women have more difficulties than men in gaining access to resources such as land. Due to the widespread norm of land inheritance by males, it is very rare that a woman owns land (Ramachandran, 2006). A total of 28 (9.1 percent) of the PAHs involved in the survey, had no formal education as against 180 (35.1 percent), 88 (28.6 percent) and 84 (23.7

percent) of them who had attained up to JHS/Form 4, SHS/ secondary and tertiary respectively. Of the traditional authorities/regulators, 3 (30.8 percent) had no formal education but 6 (64.1 percent) have had up to JHS/Form 4 while 3 (23.1 percent) had attained tertiary level education. Meanwhile, all the employees but one (1) involved in the study has tertiary level education.

Table 4.2: Demographic characteristics of respondents

		PAHS		Traditional Authorities/ Regulators		Employees	
		Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Age of Respondents	18-45	224	72.2	-	-	5	62.5
	46-60	60	19.5	11	84.6	2	25.0
	61+	24	7.8	2	15.4	1	12.5
Sex of Respondents	Male	212	68.8	10	76.9	4	50.0
	Female	96	31.2	3	23.1	4	50.0
Marital	Single	156	50.6	-	-	4	50.0
	Married	124	40.3	10	76.9	4	50.0
	Divorced	16	5.2	2	15.4	-	-
	Widow	12	3.9	1	7.7	-	-
Educational Status	Up to JHS/ Form 4	108	35.1	6	46.1	1	12.5
	SHS/ secondary	88	28.6	-	-	-	-
	Tertiary	84	27.3	3	23.1	7	87.5
	None	28	9.1	4	30.8	-	-
Migration Status	Indigene	224	72.7	-	-	3	37.5
	Migrant	84	27.3	-	-	5	62.5

Source; Field survey work, 2014

4.2.3 Length of Stay within the Communities

The results of the study shows that majority of the PAHs are indigenes of the communities. This was confirmed by 224 (72.7 percent) of them as against 84 (27.3 percent) who indicated that they were migrants. This notwithstanding, majority of the PAHs had stayed in their various communities for more than five (5) years while all the employees have been with the company (NGRL) for more than five years (see Figure 4.1). It can be deduced therefore that the data collected for the study was from respondents who have enormous knowledge and experience about the operations of NGRL and speculative activities among the affected communities. This data can therefore be relied upon to make meaningful inferences as all the respondents involved in the study had strong, in-depth knowledge of the subject under study.

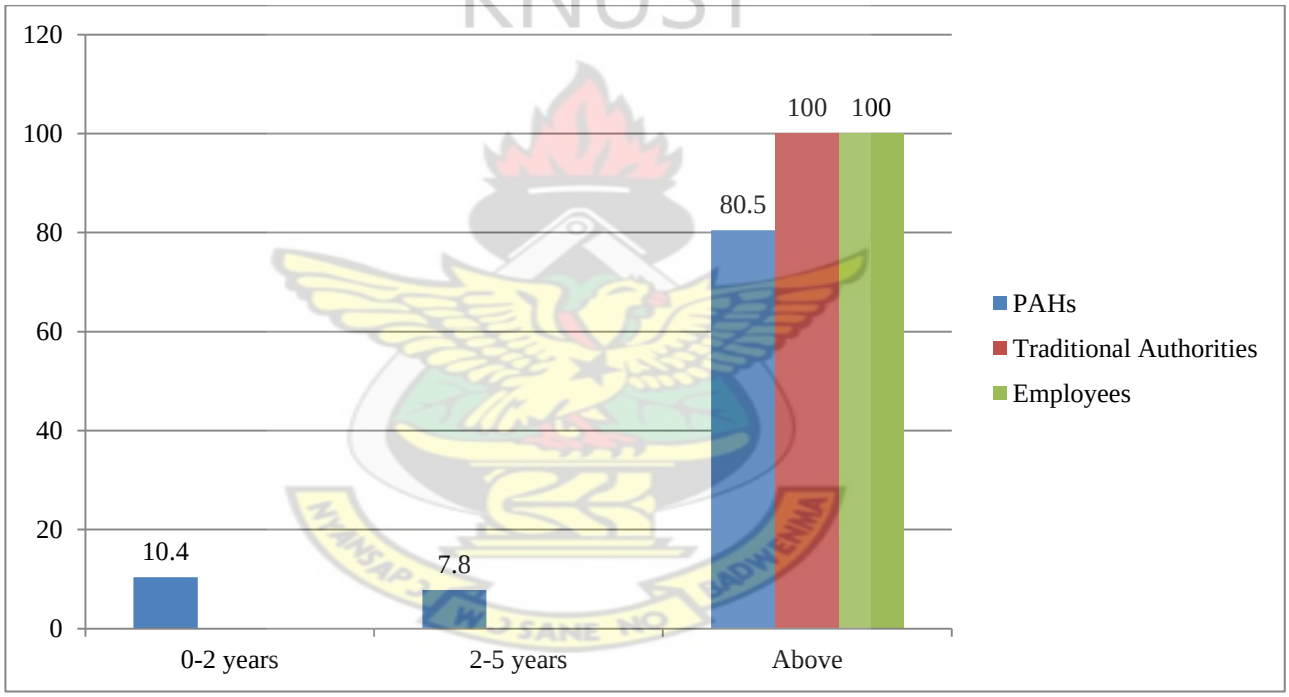

Figure 4.1: length of stay within the communities

Source; Field survey work, 2014

4.3 Type of Speculative Activities

Analysis of the data gathered from the field revealed that all the PAHs involved in the survey had either a property or a farmland that have been acquired by NGRL. In addition, 260 (84.1%) of them also know other people around their vicinity who have received compensation from the company. It can therefore be inferred that the respondents have had immense experience and knowledge about speculative activities that preceded the

establishment of the mine (see Table 4.3).

Table 4.3: Knowledge and experience about speculative activities

	Do you have your farm/land or structure acquired by NGGL		Do you know anybody around your vicinity who have received compensation from Newmont	
	Frequency	Percent	Frequency	Percent
Yes	308	100	260	84.4
No	-	-	48	15.6
Total	308	100.0	308	100.0

Source; Field survey work, 2014

As can be observed from Figure 4.2, a total of 236 (77.6 percent) of the PAHs indicated that they actually did something on their land in order to maximize the amount of compensation they received form NGRL. This included erecting of structures and planting trees on the land when they foresaw that the mining activities will actually impact on their land. In other words, the 77.6 percent of the PAHs indulged in speculative activities by erecting structures and planting crops on their land for the sole purpose of winning a higher compensation from the company.

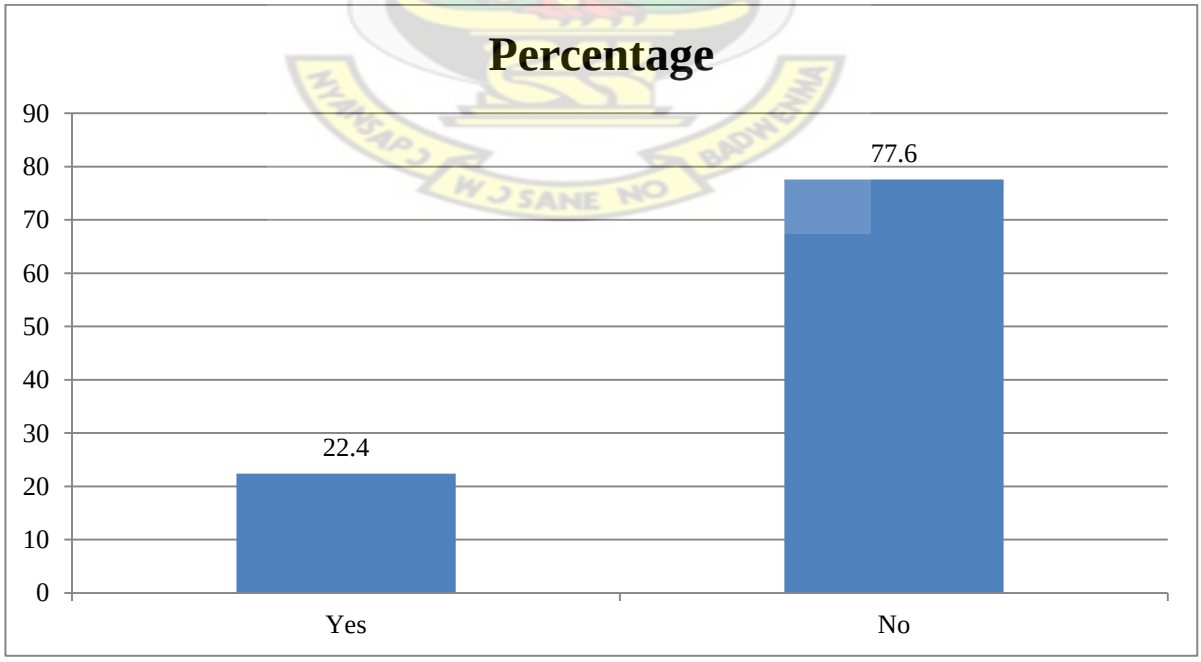

Figure 4.2: PAHs indulgence in speculative activities

Source; Field survey work, 2014

In addition to the 77.6 percent of the PAHs who engaged in speculative activities, another 164 (53.2 percent) of the PAHs indicated that they know others who engaged in speculative activities by planting crops on their land when they foresaw that project would physically impact the land as against 20 (6.5 percent) of the PAHs confirmed they know others who engaged in speculative activities by erecting structures when they foresaw that project would physically impact the land. Meanwhile, 56 (18.2%) of the PAHs revealed that they know others who engaged in speculative activities by planting tree and erecting structures on their land when they saw that the project will physically impact on their land. Only, 68 (22.1 percent) of the PAHs indicate that they did nothing to maximize the amount of compensation they received and do not know any other person who engaged in speculative activities. Surprisingly, they engaged in the speculative activities at a time where they had no idea on whether the project will actually come into being. A total of 204 (66.2 percent) of the PAHs indicated that they did engaged in the speculative activities at a time when they do not know that the project will come into being as against 104 (33.8 percent) who indicated they were aware that they project will come into being when they undertook the speculative activities. The implication is that they were much aware of the opportunity for higher compensation (speculative activities) and planned ahead of the project. The crops planted include teak, palm and cocoa. Other also made fish pound, nursery and erected wooden structures with iron sheet as well as mud and brick houses.

Plate 4.1: Seedlings planted for compensation

Source; Environment and Social Relation Department, 2012

Plate 4.2: Fishpond made for compensation

Field survey work, 2014

Plate 4.3: Mud structure erected for compensation

Source; Field survey work, 2014

Table 4.4: Types of speculative activities among the PAHs

What did you or the neighbour who received the compensation do to maximize the amount received		
	Frequency	Percent
By planting crops on the land when I/he/she foresaw that project would physically impact the land	164	53.2
By erecting structures when I/he/she foresaw that project would physically impact the land	20	6.5
I did not do anything to maximize the amount I received	68	22.1
Both planting of trees and erecting of structures	56	18.2
Total	308	100

Source; Field survey work, 2014

The results of the study again shows that majority of the PAHs have planted trees or erected structures with the view of attracting a higher compensation in the future. A total 256 (83.1 percent) of the project affected household heads indicated that they have done something in anticipation of a higher compensation in the near future. Out of which, 180 (58.4 percent) have planted crops on their land in anticipation that they will gain a higher compensation when the project impact on their land, 28 (9.1 percent) have planted crops while 44 (14.3 percent) had both planted crops and erected structures on their land for the same purpose (see Table 4.4). Majority (58 percent) indicated that they have made palm plantation on a large scale (12 acres), cocoa plantation on a large scale (5 acres), orange plantation on a large scale (5-6 acres), teak, cedera, fish pond, Poultry farm. Others have planted food crops such as cassava, yam, plantain cocoyam, pineapple, sugar cain among others. Another 29 percent have also erected two rooms made of bricks, three bed room guest house, a self-contained house, wooden, mud and block houses. One of the respondents indicate that he had planted and erected structures on about 24 acres of land in anticipation of a higher compensation should the project physically impact on his land. The revelation here is that the speculators have become more strategic with the types of crops they plant and structure they erect. They plant and erect structures that are of economic value such that they would still gain from their investment when their land is not taken by the mining company. This is centrally to the assertion of Ketiboa (2009), who indicated that the speculators sometimes misjudge and plant tree worth millions of cedis that are never acquire by the mining companies which

would mean that this scarce resource would have been dumped into the bush because these projects do not fall within the mine take (mine coverage) and so do not attract compensation. At other times, farmers have gone more for teak plant because it is quick-growing and it is of high compensation value.

Table 4.5: Planed speculative activities

		Have you or any other people that you know, done something of this sought in anticipation of a higher compensation in the near future		Total
		Yes	No	
If yes what exactly have been done	Planted crops on the land in anticipation that project would physically impact the land	180 (58.4%)	0	180 (58.4%)
	Erected structures in anticipation that project would physically impact the land	28 (9.1%)	0	28 (9.1%)
	I have not done in anticipation of a higher compensation		52 (16.8%)	52 (16.8%)
	Both planted crop and erected structures in anticipation that project would physically impact the land	44 (14.3%)	0	44 (14.3%)
Total		256 (83.1%)	52 (16.8%)	308 (100.0%)

Source; Field survey work, 2014

Plate 4.4: Wooden erected for higher compensation

Source; Field survey work, 2014

Plate 4.5: Mud structures erected for higher compensation

Source; Field survey work, 2014

A cross tabulation between the characteristics of the project affected households heads and speculative activities is presented in Table 4.5. The table shows that females are more likely to engage in speculative activities as compared to males. A total of 76 (82.6%) of project affected household heads who were females engaged in speculative activities as compared to 160 (75.5%) of the males who engaged in speculative activities. This finding

is inconsistent with with the general assertion that ownership of land as per customary arrangement is dominated by males. It is inconsistent with the FAO (2011), studies on women and sustainable food security which assert that women have more difficulties than men in gaining access to resources such as land. Age of project affected household heads was also found to associate with speculative activities. A total of 172 (78.2%) of those between the ages of 18-45 years engaged in speculative activities against 48 (80%) and 12 (100%) of those between the ages 46-60 year and above 60 years who engaged in speculative activities. This shows that as a person grows, there is the more likelihood that the person may engage in speculative activities. This can be caused by the inheritance land tenure system where elderly people inherit family land. Thus, as person grows, he or she is more likely to inherit land that can be used for speculative activities. Closely related in this is the ownership of land. The study again found that land ownership was related to speculative activities. A total of 203 (86.0%) of project affected household heads who own land engaged in speculative activities as against 40 (58.8%) of those who do not owned land but engaged in speculative activities. How, majority of theof the project affected household heads who own land are farmers and so have high potential to engage in speculative activities as shows by the data. The data shows that educated farmers are less likely to engage in speculative activities as compare to illiterate ones. A total of 53 (93.3%) of the project affected household heads who were educated were found to engaged in speculative activities as against 173 (73.3%) of literate project affected household heads engaged in speculative activities.

Table 4.6: Relationship between speculative activities and farmers characteristics

			Engagement in speculative activities		Total
			Yes	No	
Sex	Male	Count	160	48	212
		% within Sex	75.5%	22.6%	100.0%
	Female	Count	76	16	92
		% within Sex	82.6%	17.4%	100.0%
Age	Between 18 & 45yrs	Count	172	48	220
		% within Age	78.2%	21.8%	100.0%
	Between 46 & 60yrs	Count	48	12	60
		% within Age	80.0%	20.0%	100.0%
	above 60yrs	Count	12	0	12
		% within Age	100.0%	.0%	100.0%
Educational Background	Literate	Count	176	64	240
		% within Educational Background	73.3%	26.7%	100.0%
	Illiterate	Count	56	4	60
		% within Educational Background	93.3%	6.7%	100.0%
Length of stay within the communities	0-2 years	Count	16	16	32
		% within How long have you lived in the town	50.0%	50.0%	100.0%
	2-5 years	Count	12	12	24
		% within How long have you lived in the town	50.0%	50.0%	100.0%
	Above 5 years	Count	204	36	244
		% within How long have you lived in the town	83.6%	14.8%	100.0%
Ownership of land	Yes	Count	203	33	236
		% within Ownership of land	86.0%	14.0%	100.0%
	No	Count	40	28	68
		% within Ownership of land	58.8%	41.2%	100.0%

Source; Field survey work, 2014

4.4 Drivers of Speculative Activities

In assessing the drivers of speculative activities, the respondents were to indicate whether the strongly agree by selecting one (1), agree by selecting two (2), they are neutral by selecting three (3), disagree by selecting four (4), and strongly disagree by selecting five (5) based on the factors listed in Table 4.6. Descriptive statistics were computed on the drivers of the speculative activities to ascertain whether the respondents agree or not to the factors as drivers of speculative activities. Factors that obtain a mean

of less than 2.5 were considered as drivers of speculative activities. The descriptive statistics performed on the drivers of speculative activities shows that informal communication channels (inter and intra-community information sharing) created the awareness on how to people can maximize the amount of compensation from NGRL having score a mean of 2.02 with standard deviation of 0.93 according to the responses of the PAHs. This imply that majority of the majority of the PAHs opined that inter and intra-community information sharing) created the awareness on how to people can maximize the amount of compensation by planting tree and erecting structures. The PAHs also confirmed that it took some time for the company to acquire concession and commenced the project so people became aware of the opportunity for higher compensation (mean = 2.07 and standard deviation = 0.99). Again the PAHs indicated that the quest for higher compensation is just economically rational (mean = 2.03, standard deviation = 1.0).

In much the same way, employees of NGRL also agreed that informal communication channels (inter and intra-community information sharing) created the awareness on how to people can maximize the amount of compensation from NGRL (mean = 2.1, standard deviation = 1.2), it took some time for the company to acquire concession and commenced the project so people became aware of the opportunity for higher compensation (mean = 2.4, standard deviation = 0.53) and the quest for higher compensation is just economically rational (mean = 2.1, standard deviation = 0.69).

Similarly, the traditional authorities/regulators agreed in addition to the aforementioned factors that, company insiders (employees) supply information on how people can maximize their compensation (mean = 2.3, standard deviation = 0.63) and civil society organisations provided education on how people can maximize my compensation (mean = 1.7, standard deviation = 0.63). This is undoubtedly true because the traditional authorities had information from some civil society organization on how they can maximize their interest on the mining operation. They also have close connections with the some employees of the company who can supply them with information on how to maximize their benefit from the operation of the mine.

This finding is both consistent and inconsistent with modern literature on the drivers of speculative activities. The finding is consistent with the assertion of Mares (2012), who indicated that, the long development cycles of large-scale projects can mean high levels of initial public awareness and speculation about project development, well before the project

has a substantial physical presence. Such speculation raises local, regional, and national expectations of, and interest in, the potential for capturing benefits from the project. Informal communication channels alert the non-local workforce of potential employment opportunities and may exaggerate both the opportunities and the potential benefits. Thus begins a process by which various stakeholders position themselves to take advantage of any real or perceived project-generated opportunities (Mares, 2012). The finding is however inconsistent with the assertion of Ankisiba (2013), that both local members of the communities and other people from outside team up to strategically plant crops and erect structures in areas that the mine sought to acquire in the hope of securing compensation. The bureaucratic process involved in acquiring concession and quick flow of information through informal channels of communication are mostly responsible for speculative planning.

Table 4.7: Descriptive Statistics on the Drivers of Speculative Activities

	Traditional Authorities			Employees			Traditional Authority/Regulators		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Informal communication channels (inter and intra-community information sharing) created the awareness on how to people can maximize the amount of compensation from NGRL	308	2.0263	.93306	8	2.1429	1.21499	13	2.0000	.00000
Company insiders (employees) supply information on how people can maximize my compensation	308	2.5658	1.23037	8	2.7143	1.11270	13	2.3077	.63043
Civil society organisations provided education on how people can maximize my compensation	308	2.5132	1.13153	8	2.7143	1.25357	13	1.6923	.63043
Some of the people had friends or family members from outside the community who helped them to undertake these investments	308	2.5000	1.00822	8	3.1429	1.21499	13	3.1538	.37553
It took some time for the company to acquire concession and commenced the project so people became aware of the opportunity for higher compensation	308	2.0658	.99285	8	2.4286	.53452	13	2.1538	.37553
The quest for higher compensation is just economically rational	308	2.0263	1.00130	8	2.1429	.69007	13	2.1538	.37553
The quest for higher compensation is revenge to the unfair and considerable delays in the compensation process of the company	308	2.8947	1.15560	8	4.1429	.69007	13	3.8462	.68874
Valid N (listwise)	308			8			13		

Source: Field Survey work, 2014

4.5 The Possible Consequences of the Speculative Activities

As per the assertion in literature that that speculative activities cause conflict between mining companies and their host communities, the researcher sought to test this assertion among other causes of conflicts to ascertain the extent to which this assertion is valid. The survey data consisting of the 32 causes of conflict which were grouped into eight major areas according to the literature review and analysed. These 32 cause and eight groupings are:

1. **Speculative Activities**
    - Disagreement on when and how to establish moratorium date;
    - Disagreement on whether planting and erecting of structures give rights to compensation after the cut-off date; and
    - Difficulty in differentiating between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic.
2. **Environmental concerns**
    - Uncontrolled destruction of the environment and the economic livelihood of the people through surface mining
    - Unsatisfactory nature of the rate and quality of reclamation of destroyed areas;
    - Creating dust, pollutant leakages from tailings and slag, acid mine drainage and exhaust pollutants;
    - Deforestation and a decrease in the viability of land for agricultural use; and
    - Acid mine draining causing an increase in the acidic levels in rivers and lakes and endangers humans and animals alike.
3. **Economic ventures and influx of non-indigenes**
    - Employment of non-indigenes people to the neglect of the indigenes;
    - Success of the non-indigenes employed by the company at the expense of the indigenes that lacked such skills has gradually developed into hatred;
    - The operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area;

- Distribution of the limited amount of jobs that the mining companies are offering among the affected communities;
- Community members have to pay bribes to company employees to get a job;
- Disparity that exists in the incomes of the mining company staff and members of the affected communities, which acts as an advantage to them, reduces food production and result in high food prices;
- Increased pressure on local services, such as water provision and health; and
- Influx of people which has brought about its attendant social vices such as prostitution, drug usage, increased alcoholism and so on.

4. **Lack of effective communication and discussions**
   - Absence of clear, reliable, transparent and independent information on the nature of the risks involved as a result of the mining activity;
   - The direct effects particularly adverse effects were not disclosed to the communities until the unexpected happened; and
   - The absence of a comprehensive communication plan on the on the mining activities.
5. **Varying expectations of mining development impact**
   - High "hopes" of the impact of mining on the development and wellbeing of the local areas;
   - The company's role in fostering the development progress of the local people has been questionable; and
   - The locals expected much from the mining companies but the actual realization of social benefits is far below initial expectations.
6. **Compensation process and adequacy**
   - Initial exclusion of some communities' members from the processes and procedures concerning compensation;
   - Community Compensation Committee (CCC) were not people whose land has been affected by the activities of NGRL resulting in the fixing of low prices for both individual and community properties
   - NGRL has bureaucratic process of financial payments and hence follows certain procedures for any payment to be made but the communities on

the other hand want a speedy processing of their compensation payment; and

- Inadequate compensation payments to the communities to offset the loss of property-mainly farms and residential facilities affected or destroyed through mining operations.
- Relocation and compensation for ancestral areas.

7. **Small scale mining (galamsey)**
    - The lack of land for farming and wage employment that would absorb youth in the communities causes them to turn to Small Scale Mining (Galamsey), which turn to compete for the same resources as NGRL
8. **Disregard for human right**
    - NGRL conducting operations without the consent of the surrounding communities
    - Disregard for the right of the community in terms of informed consent in addition to other basic human rights was noticed; and
    - Evicting people who do not have needed land titles for their lands without consultation or adequate compensation.
    - The locals see the operation of NGRL as unsafe

From the ranking assigned to each cause of conflict, it was possible to identify the most important factors or causes of conflict between mining companies and their host communities (see Table 4.7). Based on the ranking, the five most important causes of conflict as perceived by the PAHs were: (1) high "hopes" of the impact of mining on the development and wellbeing of the local areas (RII = 0.87), (2) employment of non-indigenes people to the neglect of the indigenes (RII = 0.83), (3) the operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area (RII = 0.81), (4) difficulty in differentiating between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic (RII = 0.79) and distribution of the limited amount of jobs that the mining companies are offering among the affected communities (RII = 0.79). The finding clearly shows that the PAHs expected that the operations of the mine will lead to a dramatic transformation in their socio-economic condition. To their dismay, the impact of the operation NGRL on the socio-economic development has not been as they expected. According to them, they heard the company was going to build

airport, employed their children among others. However, the current situation is a reverse of what they expected. They complained that most of their farmland that form the basis of their livelihood have been taken over by NGRL while their children have been overlooked by the company when it comes to employment.

The five most important causes of conflict as perceived by the traditional authorities/regulators were: (1) influx of people which has brought about its attendant social vices such as prostitution, drug usage, increased alcoholism and so on (RII = 0.91), (2) initial exclusion of some communities' members from the processes and procedures concerning compensation (RII = 0.89), (3) employment of non-indigenes people to the neglect of the indigenes (RII = 0.88) and inadequate compensation payments to the communities to offset the loss of property-mainly farms and residential facilities affected or destroyed through mining operations (RII = 0.88), (5) Difficulty to differentiate between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic (RII = 0.87), and the operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area (RII = 0.87). The finding shows that the social fabric of the communities is of prime importance to the traditional authorities. The traditional authorities were of the believe that the operations of the mine is altering the social fabrics of the communities. The traditional authorities attested to the fact that there were concerns in past about initial exclusion of community members from the process and procedure of compensation. According to the traditional authorities, some of the PAHs did complain about the fact that community members who were selected to be members of the Community Compensation Committee (CCC) were not people whose land has been affected by the activities of NGGL resulting in the fixing of low prices for both individual and community properties. According to the traditional authorities, the PAHs also complained about the inadequacy of the compensation they received which raised some level of disagreement with the company. They indicated that their challenges in recent times have got to do with the problem of employment of non-indigenes people to the neglect of the indigenes, and the operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area. They cited the recent demonstration by the youth in respect to the employment of non-indigenes as well as the lack of farmland in the area which has meant that they have to negotiate with the government for some portion of forest land in the area to be given to them for farming.

The five most important causes of conflict as perceived by employees of NGRL were: (1) The operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area (RII = 0.94), (2) success of the non-indigenes employed by the company at the expense of the indigenes that lacked such skills which has gradually developed into hatred (RII = 0.88) and disagreement on whether planting and erecting of structures give rights to compensation after the cut-off date (RII = 0.88); (4) employment of non-indigenes people to the neglect of the indigenes (RII = 0.84), and distribution of the limited amount of jobs that the mining companies are offering among the affected communities (RII = 0.84). Thus, the causes of conflict as perceived by the employees are not much different from that of the PAHs and the traditional authorities.

Overall, the five most important causes of conflict as perceived by the PAHs, traditional authorities/regulators and employees of NGRL were: (1) employment of non-indigenes people to the neglect of the indigenes (RII = 0.85) and the operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area (RII = 0.85), (3) success of the non-indigenes employed by the company at the expense of the indigenes that lacked such skills has gradually developed into hatred (RII = 0.83), (4) high "hopes" of the impact of mining on the development and wellbeing of the local areas, (5) difficulty in differentiating between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic (RII = 0.79) and inadequate compensation payments to the communities to offset the loss of property-mainly farms and residential facilities affected or destroyed through mining operations (0.79). Among the group of factors that causes conflict, economic ventures and influx of non-indigenes was ranked as the major or most important causes of conflict between NGRL and the host communities, followed by speculative activities. Thus, the study affirms that speculative activities, even thou is the most important cause of conflict but could result in conflict between mining companies and their host communities, being only second to the economic ventures and influx of non-indigenes. The major challenge is the difficulty in differentiating between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic. This is consistent with the finding of Opoku-Agyemang (2002), but had not generated into clashes between NGRL and communities as asserted by Manteaw (2011).

Table 4.8: Relative importance index on the causes of conflict

	PAHs		Traditional Authorities		Employees		Overall	
Factors	**RII**	**Rank**	**RII**	**Rank**	**RII**	**Rank**	**RII**	**Rank**
SPECULATIVE ACTIVITIES	**0.74**	**4**	**0.78**	**3**	**0.77**	**2**	**0.76**	**2**
Disagreement on when and how to establish moratorium date	0.73	19	0.79	13	0.72	15	0.75	13
Disagreement on whether planting and erecting of structures give rights to compensation after the cut-off date	0.70	23	0.69	21	0.88	2	0.76	12
Difficulty in differentiating between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic	0.79	4	0.87	5	0.72	15	0.79	5
ENVIRONMENTAL CONCERNS	**0.76**	**2**	**0.79**	**2**	**0.71**	**5**	**0.75**	**3**
Uncontrolled destruction of the environment and the economic livelihood of the people through surface mining	0.75	10	0.71	20	0.69	18	0.72	19
Unsatisfactory nature of the rate and quality of reclamation of destroyed areas	0.75	10	0.79	13	0.66	21	0.73	17
Creating dust, pollutant leakages from tailings and slag, acid mine drainage and exhaust pollutants	0.75	10	0.83	8	0.78	8	0.78	7
Deforestation and a decrease in the viability of land for agricultural use	0.78	6	0.83	8	0.75	10	0.78	7
Acid mine draining causing an increase in the acidic levels in rivers and lakes and endangers humans and animals alike	0.75	10	0.79	13	0.69	18	0.74	15
ECONOMIC VENTURES AND INFLUX OF NON-INDIGENES	**0.76**	**2**	**0.82**	**1**	**0.78**	**1**	**1**	
Employment of non-indigenes people to the neglect of the indigenes	0.83	2	0.88	3	0.84	4	0.85	1
Success of the non-indigenes employed by the company at the expense of the indigenes that lacked such skills has gradually developed into hatred	0.75	10	0.85	7	0.88	2	0.83	3
The operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area	0.81	3	0.87	5	0.94	1	0.85	1
Distribution of the limited amount of jobs that the mining companies are offering among the affected communities	0.79	4	0.73	19	0.84	4	0.78	7
Community members have to pay bribes to company employees to get a job	0.74	17	0.81	11	0.56	27	0.70	23
Disparity that exists in the incomes of the mining company staff	0.71	22	0.81	11	0.81	6	0.77	10

and members of the affected communities, which acts as an advantage to them, reduces food production and result in high food prices								
Increased pressure on local services, such as water provision and health	0.68	26	0.67	25	0.69	18	0.68	27
Influx of people which has brought about its attendant social vices such as prostitution, drug usage, increased alcoholism and so on	0.74	17	0.91	1	0.66	21	0.77	10
LACK OF EFFECTIVE COMMUNICATION AND DISCUSSIONS	**0.69**	**7**	**0.73**	**7**	**0.69**	**6**	**0.70**	**7**
Absence of clear, reliable, transparent and independent information on the nature of the risks involved as a result of the mining activity	0.69	24	0.69	21	0.75	10	0.71	20
The direct effects particularly adverse effects were not disclosed to the communities until the unexpected happened	0.74	15	0.67	25	0.66	21	0.69	24
The absence of a comprehensive communication plan on the on the mining activities	0.65	29	0.82	10	0.66	21	0.71	20
VARYING EXPECTATIONS OF MINING DEVELOPMENT IMPACT	**0.79**	**1**	**0.70**	**5**	**0.75**	**3**	**0.74**	**4**
High "hopes" of the impact of mining on the development and wellbeing of the local areas	0.87	1	0.77	17	0.81	6	0.82	4
The company's role in fostering the development progress of the local people has been questionable	0.76	8	0.65	27	0.66	21	0.69	24
The locals expected much from the mining companies but the actual realization of social benefits is far below initial expectations	0.75	12	0.69	21	0.78	8	0.74	15
COMPENSATION PROCESS AND ADEQUACY	**0.71**	**6**	**0.73**	**5**	**0.69**	**6**	**0.71**	**6**
Initial exclusion of some communities' members from the processes and procedures concerning compensation	0.69	24	0.89	2	0.56	27	0.71	20
Community Compensation Committee (CCC) were not people whose land has been affected by the activities of NGRL resulting in the fixing of low prices for both individual and community properties	0.73	19	0.69	21	0.66	21	0.69	24
NGRL has bureaucratic process of financial payments and hence follows certain procedures for any payment to be made but the communities on the other hand want a speedy processing of their compensation payment	0.67	27	0.79	13	0.75	10	0.73	17
Inadequate compensation payments to the communities to offset the loss of property-mainly farms and residential facilities affected or	0.78	6	0.88	3	0.72	15	0.79	5

destroyed through mining operations								
Relocation and compensation for ancestral areas	0.66	28	0.38	32	0.75	10	0.60	29
SMALL SCALE MINING (GALAMSEY)	**0.73**	**5**	**0.77**	**4**	**0.74**	**4**	**5**	
The lack of land for farming and wage employment that would absorb youth in the communities causes them to turn to Small Scale Mining (Galamsey), which turn to compete for the same resources as NGRL	0.73	19	0.77	17	0.74	14	0.75	13
DISREGARD FOR HUMAN RIGHT	**0.62**	**8**	**0.64**	**8**	**0.49**	**8**	**0.58**	**8**
NGRL conducting operations without the consent of the surrounding communities	0.56	32	0.65	27	0.47	31	0.56	31
Disregard for the right of the community in terms of informed consent in addition to other basic human rights was noticed	0.60	30	0.65	27	0.53	29	0.58	30
Evicting people who do not have needed land titles for their lands without consultation or adequate compensation	0.54	31	0.61	31	0.44	31	0.53	32
The locals see the operation of NGRL as unsafe	0.76	8	0.64	30	0.53	29	0.63	28

Source; Field survey work, 2014

4.5.1 Agreement Analysis

It is always essential to check accuracy of collected data by statistical methods (Megha and Rajiv, 2013). In this research, ranking of the eight groupings of the causes of conflict by various respondents was checked as per Spearman's rank correlation coefficient. In order to test the relative agreement between the responses from different groups (traditional authorities, households and employees of NGRL), the ranks of the calculated RII weights corresponding to the causes of conflict was analysed using the Spearman's rank correlation method. Correlation is a relationship measure among different parties or factors and the strength and direction of the relationship. The correlation coefficient varies between +1 and -1, where +1 implies a perfect positive relationship (agreement), while -1 results from a perfect negative relationship (disagreement) (Assaf and Al-Hejji, 2006). The value near to zero indicates little or no correlation. It is a measure of association that is based on the ranks of the observations and not on the numerical value of the data (Megha and Bhatt, 2013). They compare medians rather than means and, as a result, if the data include one or two outliers, their influence is excluded (Fugar et al., 2010).

The results of the correlation between PAHs and traditional authorities/regulators, PAHs and employees, and employees and traditional authorities/regulators were 0.69, 0.79, and 0.0.82 respectively (see Table 4.9). The Spearman's rank correlation coefficient shows a strong agreement between the all the three parties in term of the major causes of conflict between NGRL and the host communities. All thou, the parties did not agreed in terms of the ranking of the individual causes, their rankings of all the causes were close to each other especially the top five causes of conflict.

Table 4.9: Spearman's Correlations

Correlations					
			PAHs	Traditional authorities	Employees
Spearman's rho	PAHs	Correlation Coefficient	1.000	.699	.790*
		Sig. (2-tailed)	.	.054	.020
		N	8	8	8
	Traditional authorities	Correlation Coefficient	.699	1.000	.802*
		Sig. (2-tailed)	.054	.	.017
		N	8	8	8
	Employees	Correlation Coefficient	.790*	.802*	1.000
		Sig. (2-tailed)	.020	.017	.
		N	8	8	8
*. Correlation is significant at the 0.05 level (2-tailed).					

Source; Field survey work, 2014

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

Following the analysis of the research data in the previous chapter, this chapter summarises the main findings and the emerging issues from the study. On the basis of these findings, some recommendations have been made as some possible actions that can help manage the speculative activities. The findings have been classified under the study objectives and the research questions to facilitate understanding.

5.2 Study Findings

5.2.1 Types of Speculative Activities

The study revealed that 77.6 percent of the PAHs indulged in speculative activities by erecting structures and planting crops on their land for the sole purpose of winning a higher compensation from the company. In addition to this, another 164 (53.2 percent) of the PAHs know others who engaged in speculative activities by planting crops on their land when they foresaw that project would physically impact the land as against 20 (6.5 percent) of the PAHs confirmed they know others who engaged in speculative activities by erecting structures when they foresaw that project would physically impact the land while 56 (18.2%) of the PAHs revealed that they know others who engaged in speculative activities by planting tree and erecting structures on their land when they saw that the project will physically impact on their land. The speculators engaged in the speculative activities at a time where they had no idea on whether the project will actually come into being. The crops planted include teak, palm and cocoa. Other also made fish pound, nursery and erected wooden structures with iron sheet as well as mud and brick houses.

The results of the study again shows that majority of the PAHs have planted trees or erect structures on a large scale with the view of attracting a higher compensation in the future. Some indicated that they have made palm plantation on a large scale (12 acres), cocoa plantation on a large scale (5 acres), orange plantation on a large scale (5-6 acres), teak, cedera, fish pond, Poultry farm. Others have planted food crops such as cassava, yam, plantain cocoyam, pineapple, sugar cain among others. Some have also erected two rooms make of bricks, three bed room guest house, a self-contained house, wooden, mud and block houses. The speculators have become more strategic with the types of crops

they plant and structure they erect. They plant and erect structures that are of economic value such that they would still gain from their investment when their land is not taken by the mining company.

5.2.2 Drivers of Speculative Activities

Both the PAHs and employees of NGRL agreed that speculative activities are caused by the fact that informal communication channels (inter and intra-community information sharing) created the awareness on how to people can maximize the amount of compensation from NGRL, it took some time for the company to acquire concession and commenced the project so people became aware of the opportunity for higher compensation and that the quest for higher compensation is just economically rational. Similarly, the traditional authorities/regulators agreed in addition to the aforementioned factors that, company insiders (employees) supply information on how people can maximize my compensation and civil society organisations provided education on how people can maximize my compensation.

5.2.3 The Possible Consequences of the Speculative Activities

As per the assertion in literature that that speculative activities cause conflict between mining companies and their host communities, the researcher tested this assertion among other causes of conflict to ascertain the extent to which this assertion is valid. From the ranking assigned to each cause of conflict, it was possible to identify the most important factors or causes of conflict between mining companies and their host communities. Overall, the five most important causes of conflict as perceived by the PAHs, traditional authorities/regulators and employees of NGRL were: (1) employment of non-indigenes people to the neglect of the indigenes (RII = 0.85) and the operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area (RII = 0.85), (3) success of the non-indigenes employed by the company at the expense of the indigenes that lacked such skills has gradually developed into hatred (RII = 0.83), (4) high "hopes" of the impact of mining on the development and wellbeing of the local areas, (5) difficulty in differentiating between genuine and frivolous complaints as a result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic (RII = 0.79) and inadequate compensation payments to the communities to offset the loss of property-mainly farms and residential facilities affected or destroyed through mining operations (0.79). Among the group of

factors that causes conflict, economic ventures and influx of non-indigenes was ranked as the major or most important causes of conflict between NGRL and the host communities, followed by speculative activities. Thus, the study affirms that speculative activities is the most important cause of conflict but could result in conflict between mining companies and their host communities, being only second to the economic ventures and influx of non-indigenes.

- Agreement Analysis

The results of the correlation between PAHs and traditional authorities/ regulators, PAHs and employees, and employees and traditional authorities/ regulators were 0.69, 0.79, and 0.0.82 respectively. The Spearman's rank correlation coefficient shows a strong agreement between the all the three parties in term of the major causes of conflict between NGRL and the host communities.

5.3 Recommendations

With these potential conflicts and tensions occurring between mining companies and their host communities in Ghana, lessons have to be drawn from them in order to ensure harmonious relations or limit the tensions anticipated. The following are therefore proposed.

5.3.1 Improve Management of Speculative Activities

Speculative activities should be carefully managed as it is central to the cause of conflicts. Newmont and other mining companies alike should intensify education via community durbars / fora, community consultations regarding when and how moratorium date is set and the fact that no compensation is paid after that date. For instance, the company could use the Local FM stations in the affected communities to inform the communities of these land access issues. The company should strengthen education on the fact that all aggrieved persons or grievances be referred to the grievance unit for quick resolution to avoid it degenerating into conflicts. Joint collaboration between the minerals commission, lands commission the mining companies and stakeholder is require to fast track the granting of concession right to the mining companies. This will mean that there will be less time with which the speculators can plan their activities. The mining companies can declare moratorium date on time to leave less opportunity for speculative activities. It is also recommended that district National Commission for Civic Education be resourced by Newmont to enable

them assist in educating the communities on issues relating to speculative activities. It has been realized from the experience of the PAHs that the payment of royalties or property rates should be spread over time. It is also appropriate that compensation is not paid once but spread over time or a percentage of amount given per year. This will make land owners have some form of financial standing over time.

5.3.2 Need for Improved Transparent Information and Communication on Employment Activities

There is the need to provide effective dialogue among all the stakeholders in themining communities with regards to the employment opportunities through the human resource department of the mining companies. Mining companies should be open and state clearly the number of people they can possibly employ from the affected communities, instead of raising the expectation of the communities so high.

This requires an information on the number of people who would have been employed, whether they are skilled or unskilled and how many will come from the local communities. Justification should be made for the employment of non-indigenes. The companies and government officials should not deceive the communities to accept the mining plans by feeding promises of employment and profit to the community in order to gain public acceptance of the mine. This requires improved participation of broad range of stakeholders and advisory groups procedures for consultation. The study recommended a multi-stakeholder decision making processes and effective public participation of members from the local host communities to resolve existing conflicts and prevent such occurrences in future.

5.3.3 Developing and Offering Alternative Sustainable Livelihood Opportunities

Taking over the agricultural land and livelihood requires that alternative livelihood programmes are designed to allow land owners to adopt the most appropriate measures that will help them sustain their lives. The mining companies must develop and expand its programmes to enable other youths and individuals who are not interested in mining to venture into other areas. Skills development to usher in the mining operation by indigenes through education and training in the industry such as scholarships and identifying areas of interest

is advocated. It is also advocated that part of the land use is reserved for community ownership and cultivation within a specified radius for farming and other economic ventures.

5.3.4 Poverty reduction and Capacity Building as a Focus of Cooperate Social Responsibilities

Mining companies should make sure that the social interests of the people in the community are taken into consideration. The priorities of the locals should reflect in the corporate social responsibility policies and operations of mining companies. Pressing issues like poverty reduction and capacity building are typically should be considered as the core CSR concerns of the companies. The construction of schools and clinics, sponsorship of health and education service providers should be typical ways mining companies should seek to reduce poverty in the mining communities. To be sustainable, the locals should participated in the decision making process and also should be equipped to sustain the projects themselves when the mining companies leave.

5.4 Conclusion

The finding of the study shows that the host communities planted tree and erected structures for the purpose of wining compensation form NGRL. The host communities have planted trees and erected structures far in excess of what was done. Their hope is that they will get a higher compensation should the project physically impact on their land. These speculative activities were driven by inter and intra-community information sharing, delay in the acquisition of concession and the fact that PAHs were economically rational. These speculative activities are not the most important cause of conflict between the communities and the host communities. However, if it is not properly managed, could trigger misunderstanding and ensuing clash and violent between the company and the host communities. Education of the host communities regarding when and how moratorium date is set and the fact that no compensation is paid after that date could play a key role in managing this speculative activities. Regulators should also help the mining companies to get concession right on time in order that the speculators will have less time to plan their activities.

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APPENDICES

APPENDIX 1

DEPARTMENT OF PLANNING, KNUST - KUMASI

QUESTIONNAIRE FOR PROJECT AFFECTED HOUSEHOLDS

This survey is being undertaken as a key component of Masters research by Kum, Kobina Mienza of the DEPARTMENT OF PLANNING, KNUST - KUMASI. The aim is to solicit the views and perceptions of selected people living in communities in the Birim North District on THE NEXUS BETWEEN MINING AND SPECULATIVE ACTIVITIES IN GHANA:

Name of enumerator:.....

Enumerators ID number:.....

Date of interview:.....

Start time:.....

End time:.....

Background Information

Sex: Male Female

2. Age of respondent: Below 18yrs Between 18 & 45yrs Between

45 & 60yrs above 60yrs

3. Educational Background. Literate Illiterate

4. If literate, specify the level of education Up to JHS/ Form 4 SHS/ secondary

School Tertiary

5. Marital status Single Married Divorce

6. Which of the following is applicable to you? Indigene migrant

IDENTIFY THE SPECULATIVE ACTIVITIES

Which community do you live in: Afosu [ ] Yaayaaso [ ] Adausena[ ] Hweakwae [ ] Ntronang[ ] Old Abirem [ ] Mamanso [ ] New Abirem [ ]

8. How long have you lived in the town indicated above?

0-2yrs [ ] 2-5 yrs [ ] above [ ]

9. Do you have your farm/land or structure acquired by NGGL?

Yes [ ] No [ ]

10. Have you ever received or know anybody around your vicinity who have received compensation from Newmont

Yes [ ] No [ ]

11. If yes from the above, what kind of compensation did you receive?

Monetary [ ] Monetary and resettlement [ ] Others (specify)……

If yes, did you or that person do anything on the land to maximize the amount of compensation received

Yes [ ] No [ ]

What did you or the neighbour who received do to maximize the amount of compensation received

By planting crops on the land when I foresaw that project would physically impact the land [ ]

By erecting structures when you foresaw that project would physically impact the land [ ]

I did not do anything to maximize the amount I received [ ]

Others(specify)

……

Did you have an idea on whether or not the project would come into being when you undertook this initiative to maximize your compensation?

Yes [ ] No [ ]

Have you or any other people that you know, done something of this sought in anticipation of a higher compensation in the near future

Yes [ ] No [ ]

If yes what exactly have been done?

By planting crops on the land when I foresaw that project would physically impact the land [ ]

By erecting structures when you foresaw that project would physically impact the land [ ]

I did not do anything to maximize the amount I received [ ]

Others(specify)

……

……

What specific structure did you erect on the land or crop did you plant

……

……

……

THE DRIVERS OF THE SPECULATIVE ACTIVITIES

Informal communication channels (inter and intra-community information sharing) created the awareness on how to maximize the amount of compensation

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

Company insiders (employees) supply information on how I can maximize my compensation

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

Civil society organisations provided education on how I can maximize my compensation

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

I had a friend or family members from outside the community who helped me to undertake these investments

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

It took some time for the company to acquire concession and commenced the project so I became aware of the opportunity for higher compensation

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

My quest for higher compensation is just economically rational

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

My quest for higher compensation is a revenge to the unfair and considerable delays in the compensation process of the company

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

THE POSSIBLE CONSEQUENCES OF THE SPECULATIVE ACTIVITIES

17. Could attempts to reap higher compensation from the company by planting and erecting of structures be a source of aggression, which may not necessarily be violent?

Yes [ ] No [ ] To some extent [ ]

Please indicate by ticking the appropriate column the relative importance of each of the following causes of conflict (which may not necessarily be violent), that has either occurred, is occurring or likely to occur between NGRL and the affected communities.

Please note that the ranking should be done in terms of: 4 = ‘very important’, 3 =

'important', 2 = 'somewhat important', 1 = 'not important'.

Factors	4	3	2	1
SPECULATIVE ACTIVITIES				
Disagreement on when and how to establish moratorium date				
Disagreement on whether planting and erecting of structures give rights to compensation after the cut-off date				
Difficulty in the differentiate between genuine and frivolous complaints as result of planting and erecting structures to reap higher compensation from the company, making compensation process problematic				
ENVIRONMENTAL CONCERNS				
Uncontrolled destruction of the environment and the economic livelihood of the people through surface mining				
Unsatisfactory nature of the rate and quality of reclamation of destroyed areas				
Creating dust, pollutant leakages from tailings and slag, acid mine drainage and exhaust pollutants				
Deforestation and a decrease in the viability of land for agricultural use				
Acid mine draining causing an increase in the acidic levels in rivers and lakes and endangers humans and animals alike				
ECONOMIC VENTURES AND INFLUX OF NON-INDIGENES				
Employment of non-indigenes people to the neglect of the indigenes				

Success of the non-indigenes and service to the industry at the expense of the indigenes that lacked such skills which has gradually developed into hatred				
The operation of the mine which has taken over agricultural land and created a pool of unemployed youth in the area				
Distribution of the limited amount of jobs that the mining companies are offering among the affected communities				
Community members have to pay bribes to company employees to get a job				
Disparity that exists in the incomes of the mining company staff, which acts as an advantage to them, reduces food production and result in high food prices				
Increased pressure on local services, such as water provision and health				