

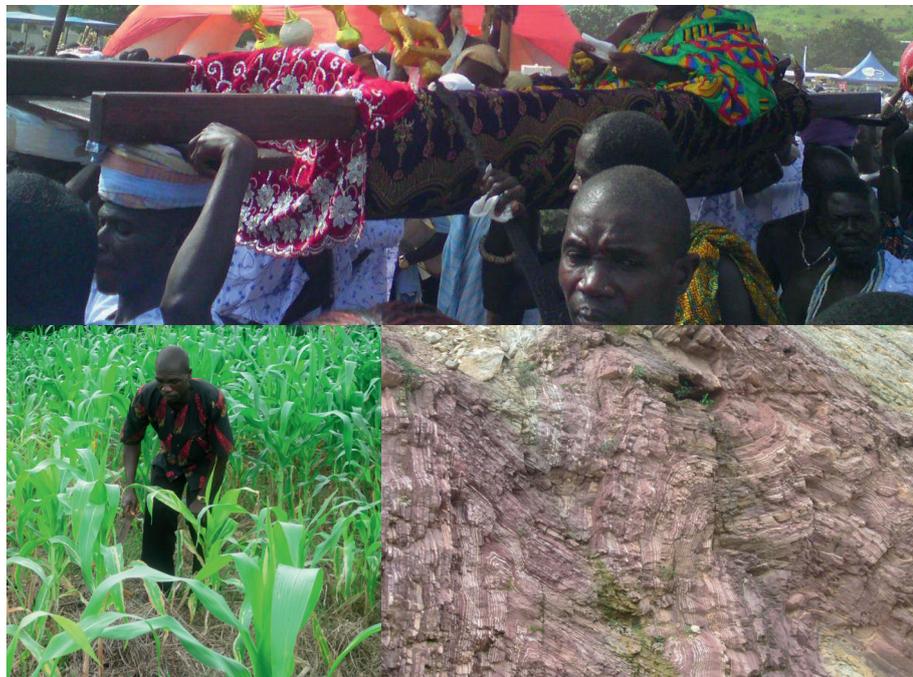
Eric Tamatey Lawer

Mining, Chieftaincy and Farmers Livelihoods:

The Case of Limestone Mining in Manya Krobo, Ghana.

Master's Thesis for the Award of Philosophy (Mphil) in
Development Studies, Specialising in Geography

Trondheim, May 2012



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**Department of Geography, Norwegian University of Science and Technology
Trondheim, May 2012**

DECLARATION

With the exception of references used, which have been duly cited, I **Eric Tamatey Lawer** do hereby declare that this thesis is the result of my own work under the supervision of **Prof. Stig Jørgensen** at the Department of Geography, Norwegian University of Science and Technology (NTNU), Trondheim, during the 2011/2012 academic year. This work has neither been submitted in whole nor in part for any degree in this University or elsewhere.

.....
Eric Tamatey Lawer (Student)

.....
Prof Stig Jørgensen (Supervisor)

May 2012

DEDICATION

To my late grandmother Mrs. Mercy Teiko Lawer (Maakpa), I have come this far thanks to your support, encouragement, love and care. I will never forget you. To all the farmers whose livelihoods 'doesn't count', I dedicate this work to you.

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I cannot end without acknowledging my friends who stood by me and motivated me to go through this study. God bless you all and may your efforts be rewarded.

ABSTRACT

Mining in Ghana has its most adverse impacts on host communities in spite of the benefits that accrue to the national economy and mining companies. The aim of this study was mainly to: 1) examine the impacts of limestone mining on farmers assets; 2) examine the role of chieftaincy institutional factors of power and culture and how they affect farmer's access to assets (mining induced benefits) at the local level; 3) Explore the coping strategies of affected farmers.

The study employed ideas mainly from the Sustainable Livelihood Framework complemented with ideas from political ecology focusing on the concepts of power and culture. The study was analyzed based on ideas from this theories and concepts. Following the qualitative research methodology, the study drew on interviews, focus group discussions as well as observations to solicit the views of 34 primary informants (farmers) and 10 key informants on the topic. The informants were selected from the two limestone mining communities of Odugblase and Bueryonye (otherwise known as the twin villages due to their proximity). The choice of both communities was to enrich the data because farmers from both communities lost land to the same concession.

The study revealed that limestone mining has adversely affected farmer's assets. It also revealed that this was largely due to the role of the traditional council (chieftaincy institution) in the mining process. Institutional factors such as power relations and the culture of obedience to chiefs constrained farmer's access to mining induced benefits (assets). The traditional council did not involve farmers in the decision making process and even when they do, their voices did not count due to the hierarchical nature of decision making. Farmers' inability to demand for accountability made the traditional council (hierarchy of chiefs) irresponsive to them. Coping strategies employed by farmers were varied with the most vibrant one being livelihood diversification.

The study therefore concludes that, for mining to benefit host communities, attention must be given to the local chieftaincy institutional politics of power as the major determinant of who gets what, whose rationality counts as knowledge and whose interest prevails. Programs must also be implemented to support livelihood diversification as a coping strategy as well as farmers in rural communities must be empowered to demand their rights.

CONTENTS

LIST OF TABLES	viii
LIST OF FIGURES	viii
1 INTRODUCTION	1
1.1 General Background.....	1
1.2 Statement of the Problem	2
1.3 Objectives.....	4
1.4 Research Questions	4
1.5 Organization of thesis.....	5
1.6 Motivation for the research	5
2 THEORIES, CONCEPTS AND ANALYTICAL FRAMEWORK	7
2.1 Introduction	7
2.2 Livelihood Approach.....	7
2.2.1 The Sustainable Livelihood Framework	8
2.2.2 Transforming Structures and Processes	9
2.2.3 Assets	10
2.2.4 Access	14
2.2.5 Vulnerability	14
2.2.6 Coping Strategies	15
2.2.7 Criticism of the Livelihood Framework	16
2.3 Political Ecology	17
2.3.1 Rationality and Power.....	18
2.4 Culture.....	20
2.5 Conceptualizing Chieftaincy (Culture and Power)	21
2.6 Analytical Framework.....	24
2.7 Document Review on Mining and the Link with Chieftaincy	26
2.7.1 Background	26
2.7.2 Mining, Livelihoods and Poverty reduction	27
2.7.3 Regulating Mining in Ghana.....	30
2.7.4 Chieftaincy and Mining	32

3	METHODOLOGY AND THE RESEARCH PROCESS	35
3.1	Methodological approach.....	35
3.2	Methodological Justification	35
3.3	Choice of informants and data collection sites.....	36
3.3.1	Informants Characteristics and Sampling Procedure	37
3.4	Primary Information Collection	38
3.4.1	Interviews.....	39
3.4.2	Focus group discussion	41
3.4.3	Direct Observation	43
3.5	Ethical Consideration	45
3.6	Researcher’s position and reflexivity during primary data collection	45
3.7	Secondary Sources of Data	46
3.8	Data Processing and Analysis	47
3.9	Challenges and Limitations of the study	47
3.10	Discussion of the rigor and quality of the material	49
4	DESCRIPTION OF THE STUDY AREA.....	53
4.1	Profile of Ghana	53
4.2	Background of Manya Krobo.....	53
4.2.1	Geographical Background	54
4.2.2	Relief and Drainage	55
4.2.3	Climate and Vegetation.....	56
4.2.4	General Economy.....	56
4.3	The Research Towns	57
5	IMPACTS OF MINING ON FARMERS ASSETS.....	61
5.1	Vulnerability Context.....	61
5.1.1	Physical Shock	62
5.1.2	Economic Shock	63
5.1.3	Psychological Shock	63
5.1.4	Stress	64
5.1.5	Trend	65

5.2	Impact on Stock of Capital.....	65
5.2.1	Impacts on Physical capital.....	65
5.2.2	Impacts on Human Capital.....	67
5.2.3	Impacts on Financial Capital	69
5.2.4	Impact on Natural Capital.....	70
5.2.5	Impacts on Social Capital	71
6	CHIEFTAINCY AND FARMERS ACCESS TO ASSETS (MINING INDUCED BENEFITS)	73
6.1	Background of Manya Krobo Traditional Council (Chieftaincy institution).....	73
6.2	Chieftaincy Institutional Factors and Farmers access to assets.....	74
6.2.1	Our Chiefs: Representation, Accountability and Responsiveness	75
6.2.2	Power: Chiefs rationalization versus farmer’s rationality	78
6.2.3	The Cultural Context (Chieftaincy culture of obedience).....	84
6.3	Conflicting local institutions (Role of the Local district assembly).....	86
7	COPING STRATEGIES.....	89
7.1.1	Natural Resource Based activities as a coping strategy.....	90
7.1.2	Non Natural resource Based Activities as a coping strategy	91
7.1.3	Social Capital as a coping strategy	93
7.1.4	Migration as a coping strategy	95
8	SUMMARY, CONCLUSION AND RECOMMENDATION	97
8.1	Chieftaincy as a mediating institution.....	98
8.2	Impact on assets, vulnerability and coping strategies	99
8.3	Recommendations	99
8.4	Limitation of the Study and scope for further research.....	101
	REFERENCES.....	103
	APPENDICES.....	113

LIST OF TABLES

Table 1	Primary Informants by sex, age group and land owner status.....	37
Table 2	Manya Krobo District population and growth rate between 1970 and 2010.....	55
Table 3	Age and sex structure of Manya Krobo District 2010.....	55
Table 4	Population of Research Towns, 2010.....	57

LIST OF FIGURES

Figure 1	DFID Sustainable Livelihood Framework	8
Figure 2	Analytical Framework	25
Figure 3	Map of Manya Krobo showing research towns.....	59
Figure 4	Pictures showing impacts on physical assets of farmers (from top left: Cracks in water storage pot; pot holes on roads and cracks in buildings)	67
Figure 5	Pictures showing impacts on farmers crops and land (From left, reddish brown maize leafs and flooded farm)	71

1 INTRODUCTION

1.1 General Background

This thesis explores the impact of mining on the livelihoods of farmers in mining communities in Ghana. Specifically, I studied the impacts of limestone mining on farmer's assets and the institutional constraints of gaining access to mining induced benefits. Focus was placed on the role of chieftaincy and how chieftaincy institutional issues of power, culture, accountability and responsiveness at the local level affects farmer's access to mining benefits which can be considered as assets for the pursuance of their livelihoods as well as their coping strategies. The study was conducted in the limestone mining communities of Odugblase and Bueryonye in the Manya Krobo district of South Eastern Ghana.

Despite the revenue that Ghana derives from mining activities, there is growing unease with regard to the real benefits that accrue to ordinary people in the mining communities (Boon & Ababio 2009). This study argues that, the extent to which mining benefits host communities is largely based on local institutions and processes that mediate the process. It also argues that, people are capable agents who adopt several strategies to survive in the wake of a shock but their outcomes to a large extent are influenced by the mediating institutions and processes at the local level.

Theoretical insights were drawn from the livelihood framework, political ecology and the concepts of power and culture. This was to help research on the impacts of mining on the assets of farmers and the role of chieftaincy at the local level. Whiles many studies have been conducted on mining and its impacts on host communities in Ghana very little has been mentioned concerning the role of local institutions and processes specifically chieftaincy culture and power relations and how it affects farmer's access to mining induced benefits (Yaro 2010).

The study aims to break new grounds by investigating the role of the chieftaincy institution in the mining process. The study also attempts to investigate how a 'chieftaincy culture of obedience' makes it difficult for local people to demand accountability from chiefs. This research has become crucial because although several studies have been conducted on mining in Ghana; this particular case has been ignored in spite of the media attention it gained since 2005.

By the use of qualitative research tools such as interviews, focus group discussions, observations, and a review of available literature, the relationship between mining and chieftaincy and its impacts on farmer's assets and their coping strategies will be explored by interviewing farmers, chiefs, officers of mining company and officers from the district assembly for their perceptions and views on the topic. Focus group discussions will allow land owners to narrate their stories about the mining process and the role of their chiefs.

In all, the study revealed that, mining generates benefits to the country. However, it can make livelihoods of host communities vulnerable depending on the nature of institutions and processes that mediate their lives at the local level. This may be termed as resource curse. The study revealed that, the chieftaincy institution constrained farmer's access to mining benefits due to the culture of obedience and power relations between chiefs and farmers which doesn't make chiefs responsive to the farmers' livelihoods.

1.2 Statement of the Problem

In lesser developed economies such as Ghana, the extraction of resources from a region is expected to offer the potential for growth and development. In the year 2005, a multinational company controlled by Heidelberg Zement AG of Germany (94.5%) and locally known as Ghana Cement Company (Ghacem) was granted concession for mining limestone at Oduglase and Bueryonye communities in the Manya Krobo district of Ghana for the production of cement.

Land has over the years been the major livelihood asset of the krobo tribe in Ghana because agriculture is the main economic activity accounting for approximately 74% of all employments in the district a figure quite higher than the national average of about 70% (Manya Krobo District Assembly, 2011). Crop farming both for household consumption and also for the market and small scale limestone quarrying over the years has been the main livelihood activities of residents of these communities. Whiles crop farming contributes about 50% to household income, private limestone quarrying contributed about 48% with all other activities contributing 2%. (Household Interviews from the field).

However, since the transfer of land rights from farmers to Ghacem, mining activities are having dire socio-economic and environmental impacts on these mining communities. This has generated a lot of arguments as to whether mining benefit local communities or whether it makes

them vulnerable. For instance, in an attempt to make sure that mining is beneficial to mining communities, there are calls for the need to increase royalties mining companies pay to local communities from the current 5.5% to 30%. Whilst the Ghana Chamber of Mines believe that the increase in royalties will help mining communities to embark on development programs that will improve their livelihoods; the Ministry of Lands and Natural Resources also think that, the problem is not the amount that is paid but how the money paid is used by traditional authorities (chiefs) and the district assembly at the local level, thus the accessibility of affected farmers to mining induced assets. Obviously, this has brought to the fore how important chiefs and district assemblies (Local institutions) are in the quest to make mining benefit host communities. However, attention hasn't been given to this local dynamics in research (Yaro 2010).

Much has been written on the impacts of mining on livelihoods in Ghana (see for example Boon & Ababio 2009; Akabzaa et al 2008; Yankson 2010). Whilst some of these researches focus on the socio economic and environmental impacts of mining (See Akabzaa et al 2008; Benjamin 2001; Adjei 2007) others also focus on the corporate social responsibilities (See Yankson 2010; Boon & Ababio 2009). A few other researches also tried to investigate structural elements and how they affect the impacts of mining on host communities (See Hilson & Yakovleva 2007; Hilson et al. 2007; Hilson & Potter 2005; Ayee et al. 2011). Whilst Garvin Hilson and Porter indicate a depth of research on effects of policies on mining, e.g. mining sector reforms, structural adjustment policies to mention a few), the role of local institutions such as chieftaincy have largely been ignored (Yaro, 2010).

Chiefs control and wield significant power over land in the Manya Krobo district just like most other parts of Ghana where customary land ownership still persist. Government often appeals to traditional leaders (chiefs) to release lands within their jurisdiction or traditional area to resource developers after they have been granted mining rights at the ministerial (national) level. In the Manya Krobo area, the chieftaincy institution otherwise known as the traditional council played a major role in the release of land to Ghacem for the mining of limestone and continue to play a role in the areas of negotiations with Ghacem for mining benefits, accessing royalties and conveyance fees on behalf of the people which are supposed to be redistributed for the development of mining communities.

However, there is a widespread grassroots' public perception and dissatisfaction about the role of chiefs and its impacts on farmer's access to mining induced benefits in the mining

communities. It has been argued that the mediation role played by chiefs constrained farmer's access to mining induced benefits and has affected negatively their livelihoods. Chiefs are the custodians of the land and chieftaincy still remains a major form of traditional governance in Ghana. They made negotiations on behalf of the farmer, took decisions on their behalf throughout the mining process and it has been argued that, farmers access to mining induced benefits may to a large extent depend on the role of the traditional council.

Against the above background, this thesis aims to investigate the impacts of mining on farmer's assets and the role of chieftaincy as a mediating institution. It also seeks to investigate how the people cope within their context. It aims to add to the burgeoning literature on the resource curse debate with a micro focus using the case of Limestone mining in Manya Krobo district in Ghana.

1.3 Objectives

The general objective of the study is to investigate the impacts of mining on the livelihood of the host communities. The study mainly aims at investigating chieftaincy as a mediating institution which negotiates, access, and redistribute mining induced benefits for and on behalf of their subjects (farmers) and how this affects their livelihoods. It also aims at studying the coping strategies of adversely affected farmers.

Specifically, the study aims at the following:

- Examine the impacts of limestone mining on farmers' assets.
- Examine the role of chieftaincy institutional factors of power and culture and how it affects farmers' access to assets (mining induced benefits).
- Explore the coping strategies of adversely affected farmers.

1.4 Research Questions

- What are the impacts of limestone mining on farmer's assets?
- What is the role of the traditional council (chieftaincy institution) in the mining process and how does institutional factors of power and culture affect farmer's access to mining induced benefits?
- What are the coping strategies of adversely affected farmers ?

1.5 Organization of thesis

This thesis is structured into eight chapters. Chapter one provides the introduction to the whole thesis, background of the study, statement of research problem, objectives of the study and statement of research questions. Chapter two focuses on the theoretical and conceptual framework of the study. Chapter three presents the methodological framework of the study. Chapter four provides a brief profile of Ghana as well as the study areas. A background into the economy of the study areas prior to mining is also presented. Chapters five, six and seven focus on the empirical data and analysis. Chapter five presents the impacts of mining on farmer's assets. Chapter six presents a background of chieftaincy in the Manya krobo and discusses the role of the traditional council, in the mining process and how it affects farmers access to mining induced benefits in relation to power and culture as a transforming processes. Chapter seven presents the coping strategies of farmers. Chapter eight presents summary, conclusions and recommendations.

1.6 Motivation for the research

Lectures and courses I followed during my first year in my masters program at the Norwegian University and Science and Technology shaped my thoughts and have influenced my views about human environment relations. I was introduced to thought provoking ideas about how rights are defined and negotiated over resources among people from different social groups. Growing up in rural Ghana to a farming household in a hierarchical society, coupled with my exposure to several works from piers Blaikie, Jesse Ribot (political ecology) as well as livelihood researches which have placed poor people at the center of research and argue that they are capable agents gave me confidence that I can contribute to knowledge through empirical research that can possibly influence policy by delving into the micro politics of farmer struggles over access to resources as well as their coping strategies. I am motivated to tell the stories from the view point of the poor.

2 THEORIES, CONCEPTS AND ANALYTICAL FRAMEWORK

2.1 Introduction

The complexity and plurality of reality makes it impossible for it to be fully depicted by a single theory. In this thesis, eclectic concepts and theories will form the analytical approach to guide the interpretation of data. This chapter operationalized the concepts and theories that are important for illuminating the research questions and the analysis of the data.

The chapter is divided into three parts. The first part focuses on the theoretical framework: Sustainable Livelihood Framework, emphasizing on how the chieftaincy structures and processes influence farmers access to assets. The second part presents other relevant concepts or approaches which together with the theories constitute the analytical approach of the study. Specifically, concepts or approaches like political ecology (focusing on power and rationality) and culture are discussed. Ideas from these theory and concepts will be used to analyze the findings.

2.2 Livelihood Approach

The Livelihood approach otherwise known as the Sustainable Livelihoods (SL) approach is an approach for understanding poverty and livelihoods DFID (1999). The discourse on Livelihoods is a major area in both natural and social sciences. Whiles the literature from natural sciences primarily focuses on the sustainability of people's livelihoods (See Khan 2004; Carney 1998), literature from the social sciences focuses on improving the livelihoods of poor people (Ellis 2000 cited in Lund et al 2008:140).

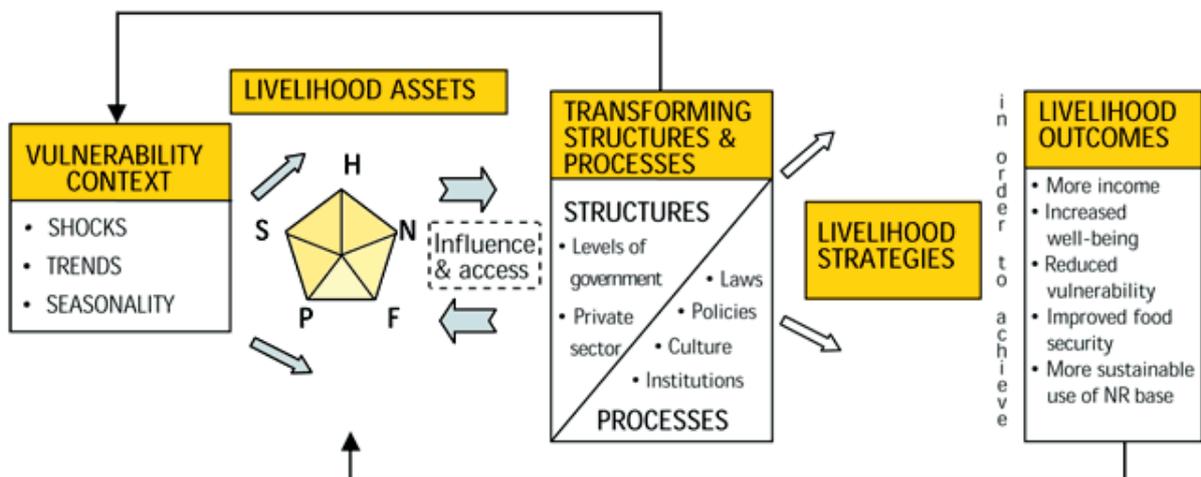
Subsequent to the consolidation of the concept by Chambers & Conway (1992), Carney (1998) based on their earlier definition presented this definition “*A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living*” (Carney 1998:4). According to her, “*a livelihood is sustainable when it can cope with and recover from shocks and stresses and maintain or enhance its capabilities and assets both now and the future without compromising its resource base*” (Carney 1998:4).

Carney (1998) defined livelihood assets, both material and social as ‘capital’ in different forms, which when combined together, is deployed to enhance people’s well-being. This new form of capital includes the natural capital, human capital, social capital, physical capital and financial capital. This is explained later under sub section 2.2.3 below.

2.2.1 The Sustainable Livelihood Framework

The SL Framework is the main analytical tool of the SL approach although different livelihood frameworks have emerged over the years. According to Carney (1998), the framework shows the way five factors interact to shape the livelihoods of people and their relative importance. A careful analysis using the framework therefore helps researchers to point out to policy makers the major constraints people face as they pursue a livelihood. It highlights the *assets*, *vulnerability*, *mediating institutions*, *coping strategies* and *livelihood outcomes* showing how they all interact to influence the overall wellbeing of individuals and households. Presented below is the UK Department for International Development (DFID) Sustainable Livelihood Framework. Focus here is on the Transforming Structures and Processes, assets as well as coping strategies.

Figure 1 DFID Sustainable Livelihood Framework



Source: DFID (1999)

From the diagram, at the center of the framework are the assets on which households draw on to build their livelihoods. These assets are influenced by the vulnerability context, which refers to the sources of insecurity to which households and their assets are vulnerable. The vulnerability context is influenced by the transforming processes and institutions which intend influence the

accessibility and use of assets (capital). The structures and processes, together with the vulnerability context determine access to capital as well as the livelihood strategies to adopt which intend influence the livelihood outcomes of people. Relevant in this work is how Transforming Structures and Processes affect the assets and how people cope in the context.

2.2.2 Transforming Structures and Processes

Transforming *structures* and *processes* occupy a central role in the Livelihood framework in determining the access to assets. Within the framework, it refers to institutions, organizations, policies and legislation that shape livelihood. ‘They operate at all levels, from the household to the international arena, and in all spheres, from the most private to the most public’ (DFID, 1999). They have a direct impact upon whether people are able to achieve a sense of well being, example access to mining induced benefits, land, limestone etc. Transforming structures and processes are now being renamed ‘Policies, institutions and processes’ within the DFID framework (Hobley 2000:12).

Structures/institutions set and implement policies, deliver services, legislate, and perform several functions that affect livelihoods. It is important to have well-working structures because their absence can be an obstacle to obtaining viable and sustainable livelihoods (DFID 1999). They influence households or individuals access to assets and so the structures and processes can be constraints as well as resources. They are constraints when the laws, policies, cultural practices, power relations between the institutions and the people, serve as barriers to the people’s access to assets. They are resources when they enhance people’s access to assets (North 1990; Giddens 1984) For example, this could be a situation whereby chieftaincy as a local government enhances or constrains farmer’s access to mining induced benefits (assets or capital) in a situation where they have already been denied access to land and limestone.

Structures and Processes in the framework is of the view that although people are capable of acting rationally by linking their livelihood decisions with outcomes which makes them purposive, social actions are not entirely the outcome of individual decisions or actions but also the structures or institutions which mediate their livelihoods (Giddens 1984). It is of the view that, structural processes that guide the relationship between institutions and people can either enhance people’s livelihoods through enhancing their access to capital but also constrain their access to assets. Structures therefore may grant or deny people’s access to assets, According to

Ellis & Allison (2004), the livelihoods of rural people without access, or with very limited access to natural resources are vulnerable because they may find it difficult to obtain food, accumulate other assets, and recover after misfortunes or shocks. Institutions may be cultural beliefs that guide behavior and hence shapes human action. It could also be power relations that give access to assets. Processes could be negotiations, contestations over mining induced benefits.

2.2.3 Assets

According to Carney (1998), assets are the resource stocks which individuals deploy to pursue their livelihoods. Carney (1998) defined assets to include both material and social resource stocks and as such defined assets as capital. Five different types of capitals (social, natural, financial, physical and human) are identified in the livelihood framework in the form of a *pentagon* although other forms of capitals have been identified by other people e.g. political capital. The *asset pentagon* lies central to the framework. The *asset pentagon* is the idea that, the centre point of the pentagon, where the lines meet, represents zero access to assets while the outer perimeter represents maximum access to assets (DFID 1999). On this basis different shaped pentagons can be drawn for different people or social groups within communities.

Important here is the view that, one asset may generate multiple benefits. For example, a natural capital say land or limestone may generate financial capital. People may extract and sell limestone to get financial capital. They may as well use land as collateral to access financial loans. Financial resources may be used to educate children to improve human resources. Livestock may be a form of social prestige as well as wealth. It is important for institutions that influence people's access to capital to understand this complex relationship in order not to make people vulnerable. In a mining context, mining induced benefits such as compensation (financial, physical, human or social, natural) may be very important to farmers in mining communities and its access is important to viable livelihoods. Assets are used in two senses in this work. The first sense is those assets people possess before mining and the second sense is mining induced benefits like offering alternative land, financial compensation, royalties, alternative livelihood activities, education and training, infrastructural development by mining companies like building of roads, schools, etc. The different forms of capital are discussed below.

Social capital

The role of social capital in livelihoods has been recognized in livelihood studies. Social capital is defined as “*the rules, norms, obligations, reciprocity and trust embedded in social relations, social structures, and society’s institutional arrangements, which enable its members to achieve their individual, household or community objectives*” (Narayan 1997:50). It includes ones connections, networks, friends, family members. It could also be the transfer of information between individuals and groups to facilitate decision making for collective action (Adger 2003:389). Such networks are assets that can be deployed when there is some perturbation to the individual, group or society. It can be deployed to give access to other capitals to enhance the security of livelihoods.

Putman (2000) categorized social capital under *bonding* and *bridging* (Adger, 2003). Bonding social capital is based on friendship and or kinship (Adger, 2003). It stresses the horizontal links between similar groups of people whiles’ bridging social capital is based on bonds of trust and reciprocity with other ties that are external to the group normally between socially heterogeneous groups. It is the different combination of bonding and networking social capital that allow individuals, groups and communities to confront vulnerability or external pressures. According to Putnam (2000), social capital is a geographic concept because relationships of people is shaped and molded by the socio cultural context in which they live. Bonding social capital places importance on personal or family relations home or abroad, nuclear and extended family friends who may support or draw on another’s support in times of need.

Bridging social capital places importance on trust between people in different social classes (Putman 2000). It could be between government and local communities or chiefs and their subjects, or farmers and pressure groups. In this study, farmers in mining communities may bond into land owners association, farmers association which may give support, training for capacity building on new ways of farming, giving valuable information to its members that individually they wouldn’t have access to or for collective action to demand accountability from chiefs or to allow them in decision making about issues that affect their livelihood e.g. mining. Such farmer groups may also give support to its members during times of need such as loans to acquire farm inputs or to pay school fees, get alternative land or get other forms of capitals needed. Farmers and mining communities may also have networks at the local, national and international level that they can draw on when there is a shock. They may bridge with civil

society groups to address their grievances and negotiate access to resources needed to pursue viable livelihoods.

But the measurement of social capital is debatable as there is no consensus on it. Does the sum of a group's membership determine the size of social capital? Poorest people may have the most friends, but they may not be able to offer help when it is needed or make the needed social impact. They may also have weaker and poorer networks as the rich people prefer to have rich friends, and vice versa though the two may not be mutually exclusive. The size and accessibility of social capital to individuals, households and groups varies across time and space.

Natural Capital

Natural capital refers to a set of priceless environmental goods and services that form the basis of human and non human life (Adger 2003). Carney (1998:7) defined natural capital as “*the natural resource stock from which resource flows useful to livelihoods are derived*”. Examples are land, limestone, gold, water and other biological resources. In rural communities, the natural capital is one of the most significant capitals to households especially in the global south where many households depend directly and indirectly on natural resources. It may be deployed to pursue livelihoods or to cope when there is a shock. It also helps people to get other forms of capital.

In this study, giving the research objectives, the confiscation of two major livelihood natural capitals (land and limestone) may have dire consequences on farmers' livelihoods. Limestone is a non renewable natural resource which may be permanently depleted locally according to the rate of extraction by human beings. If its exploitation does not directly benefit farmers and their communities, it can make their livelihoods vulnerable. Farmers access to say alternative land as a compensation from mining companies could be conceptualized as natural capital which they may deploy for a living. Farmers' access to appropriate and acceptable compensation may be crucial to their livelihoods.

Physical Capital

Physical capital is the basic infrastructure like (roads, shelter, storage facilities farming equipments) and the means which enable people to pursue their livelihoods (Carney 1998:7; Lund et al 2008:140). In this study giving the research objectives, the capital assets may include

roads, buildings or houses of farmers, water storage facilities, farm equipments and irrigation facilities. Mining can impact negatively or positively on farmers' physical capital this can affect the stock of capital that farmers deploy to earn secured livelihood. Mining could destroy buildings by way of cracks due to shock waves, it can destroy roads, it can lead to pollution of water bodies and if enough financial resources are not provided in the form of compensation, relief items or community support items, the livelihoods of mining communities can be negatively affected. However mining company's provision of other forms of infrastructure can be deployed to cope in times of perturbation.

Financial Capital

This comprises the financial resources that households use or draw on to satisfy their needs. This may include (savings, credit, remittances, and pensions). Financial resources may give households several livelihood options (Lund et al 2008; Carney 1998). Farmers' access to adequate compensation, royalties and alternative livelihood activities may enhance their financial capital and vice versa, the outcome which may determine their livelihood outcomes. Inaccessibility to land and limestone could be a deprivation of financial capital stock of farmers. Farmers may however deploy financial compensations they receive, wages from employment offered by mining, together with other forms of capital to cope or to live.

Human Capital

According to Carney (1998), human capital involves the labor resources available to households, which have both quantitative and qualitative dimensions. The former refer to the number of household members and time available to engage in income earning activities. Qualitative aspects refer to the levels of education and skills and the health status of households (Carney 1998, cited in Rakodi 2002). Lund et al (2008) go further to attribute it to the ability to utilize the skill people have, physical strength, innovative abilities, perseverance and good health to pursue different livelihood strategies. Human capital could also be ability of chiefs to be sensitive to changes in the society, ability to negotiate for and on behalf of the people with mining companies and government, awareness and attention of things going on in their area of jurisdiction and ability to be proactive in the mining process as the leaders of their people. It

could also be scholarships given to mining communities to educate themselves, or on the job training for them to gain employment with mining companies.

2.2.4 Access

According to the Livelihood Framework, access is the opportunity in practice to use a resource, obtain information, material, technology, employment, food and income (Chambers and Conway 1992:8). It is used in the theory as the ability of households to use resources (natural, human, social, physical and financial) to meet their needs. It is also used to show how individuals and households get information from governmental and nongovernmental organizations about issues that affect their lives. Access is a very important concept in the livelihood framework. The livelihoods of rural people without access, or with limited access to natural resources may be vulnerable because they may find it difficult to obtain food, accumulate other assets, and recover after a misfortune or shock (Ellis & Allison 2004). Institutional arrangement, societal norms, power relations and shocks may affect individuals and households, access to resources. The accessibility of farmers to mining induced benefits as mediated by chieftaincy may be a key to their livelihood outcomes. For instance, chiefs as negotiators for mining induced benefits, as the legitimate institution for accessing royalties and redistributing may hinder farmers' access to these resources which are key assets. Land litigations between chiefs may as well serve as a barrier for farmers' access to mining benefits.

2.2.5 Vulnerability

According to the livelihood Framework, the assets which people possess or have access to, the livelihoods they pursue and the strategies they adopt are influenced by the context within which they live. This is conceptualized as having two broad dimensions: Factors that influence their vulnerability, and policies, institutions and processes (Rakodi 2002:14). The livelihood framework discusses vulnerability as the opposite of security. It could be the situation whereby individuals and households from the studied communities get physically and emotionally wounded or hurt as a result of not being able to cope with loss of land and limestone and not getting access to mining induced benefits in return for their loss. It may emerge when individuals and households have to face a harmful shock without adequate capacity to respond effectively.

Vulnerability encapsulates the growing recognition that the extent to which people suffers from calamities depends both on how their livelihood is exposed shocks and on their capacity to withstand it (Dilley & Boudreau, 2001). For example, physical, economic and psychological shock that may come with the transfer of land rights to mining companies and constraints of getting access to mining induced benefits due to institutional factors like power may have the tendency to increase risk and uncertainty of farmer households which may lead to a decline in well being.

Carney (1998) argues that it is important to analyze trends, shocks and stress in order to understand the vulnerability of households. Long term changes in the natural resource base of the villages (confiscation of land and limestone from local resource users) and recurring changes such as increase in prices of food as a result of decreasing crop yields, unemployment as well as short term shocks such as health issues due to say dust from the mine sites and resource conflicts that may emerge may be particularly important in this context. This has the tendency of making livelihoods vulnerable.

In this research, the inaccessibility of farmers to land and limestone due to transfer of land rights to a multinational company, Ghacem is considered as a major driver or pressure on the livelihoods of the peasants and this can impact negatively or positively on their livelihoods. The roles of chieftaincy institutional factors of power and culture which may constrain farmers' access to mining induced benefits as well as the coping strategies of affected farmers are investigated.

2.2.6 Coping Strategies

In contrast to the earlier ways of conceiving poor people as passive victims, livelihood studies and, more specifically, the concept of coping strategies, “*highlighted the active or even proactive role played by the poor in providing for their own sustenance despite their lack of access to resources and services to an adequate income*” (Schmink, 1984 cited in De Haan and Zoomers 2005: 28). In livelihood studies, in as much as one identifies the threats to households, and their assets, one must also identify their resilience. That is their ability to mobilize assets to exploit opportunities and resist or recover from the negative effects of the changing environment (Rakodi 2002:15).

Shocks, adverse trends and stress may influence people's livelihood vulnerabilities but a livelihood becomes truly vulnerable when it lacks adequate coping capacities. A secure livelihood is the main goal of peasants. In order to achieve this, households may utilize a range of capabilities and assets that they possess. It has been established in research that, households do not experience risk in the same or equal measure (See Adjei 2007; Adger 2003; Hesselberg & Yaro 2006). The degree of impact may depend on the various forms of capital those individuals and households possess to withstand uncertainties. People may adopt various socio-cultural and economic survival strategies and activities to achieve a secured livelihood (Ellis 2008; Ellis 2000).

Coping strategies are pursued by peasant households to withstand trends, shocks and uncertainties throughout the year. Coping strategies could take the form of farm and/or nonfarm activities (See Bryceson 2002). The farm activities may include natural resource based activities such as agriculture intensification, long distance farming and share cropping. The nonfarm activities or strategies may include livelihood diversification. Diversification according to Ellis (1998) may incorporate expenditure-reducing and emergency strategies like the use of social capital and diversification of economic activities like trading.

The aim of coping strategies is to make households resilient from unexpected situations or calamities. If the intensity and duration of disaster increases and crisis triggered longer than necessary or expected, then capable individuals or households may also become vulnerable. In order to be able to formulate realistic poverty reduction policies for peasants in a mining context, it is very important to study their coping strategies so as to know what is meaningful to their daily needs and lives. In this research, coping strategies of farmers in the limestone mining communities will be investigated. Households may deploy different forms of capital to cope as explained under assets above.

2.2.7 Criticism of the Livelihood Framework

Over the years, through experience of the usage of the Livelihood Framework, several criticisms have been thrown against it. De Haan & Zoomers (2005) in their work, *exploring the frontier of livelihood research*, criticized the model for being static and not incorporating social change. After examining the roots of the livelihoods approach, they explored two major challenges: '*the conceptualization of the problem of access*', and '*how to achieve a better understanding of the*

mutual link between livelihood opportunities and decision-making'. That is they introduced two new concepts of access to livelihood opportunities and decision making power. They argued that, access to livelihood opportunities is governed by social relations, institutions and organizations, and that power is an important (and sometimes overlooked) explanatory variable. It has been argued that the framework ignores political capital and does not place emphasis on the role of politics in livelihoods. The model criticized for being too complex. It has too many themes which makes it quite impracticable to apply or adapt as a whole in research because of it consumes a lot of time.

2.3 Political Ecology

Though there is no watertight definition for political ecology due to the differences in its application and strands, Robbins (2004: 12) provided a somewhat general definition as “*an empirical researched based explorations to explain linkages in the condition and change of social or environmental systems, with explicit consideration of power relations*” (Robbins, 2004: 12). It is different from other forms of ecological studies because it politicizes environmental issues (Bryant1998). It focuses on how rights are defined, negotiated and struggled over, among different social groups for example chiefs and their subjects (farmers and land owners) over resources.

In 1935, Frank Thone coined the word political ecology but without any coherent definition until Wolf (1972) gave it life in his work, ‘*ownership and political ecology*’ in which he discussed the relationship between local rules of ownership and ecological change (Wolf 1972:202). According to (Bryant1998:80), the field gained prominence in the 1970’s and 1980’s as a result of the emergence of cultural ecology and development geography. Building on the strengths of political economy and Cultural ecology, Wolf (1972), Blaikie (1985), Blaikie & Brookfield (1987) laid the foundation for the discipline of political ecology (Muldavin 2008:689). Different strands have emerged over the years (Bryant & Bailey 1997; Walker, 2006) but central to the field is the consideration for power relations (Walker, 2006:391).

The application of political ecology by geographers therefore depends on what one is interested in. Whiles some scholars focus more on ecological factors; others focus more on political issues. For example political ecology is used in this thesis as a situation where

institutions (chieftaincy) which is supposed to represent the public interest (farmers) in mining is embedded in the exercise of power and the protection of its own interest while it uses its power to rationalize its decisions as espoused by Flyvbjerg (1998)'s work on Rationality and Power. This is explained below under sub section 2.3.1. The assumption is that, chieftaincy as a local governmental institution with the power to represent farmers in negotiating and accessing mining induced benefits may define what is rational and what is not, because power may define rationality. Solving problems affecting farmers in relation to mining may be based on the rationality of chiefs which may be a function of their power although reasons they may give or forward to defend their policies or decisions may be irrational to farmers. The concept of rationality and power is explained below.

2.3.1 Rationality and Power

According to Flyvbjerg (1998), when Francis Bacon hypothesized that '*Knowledge is power*', one cannot separate the two from each other. To him, the relationship between knowledge and power is commutative, and not only is knowledge power, but more importantly, power is knowledge. He inductively generated a grounded theory which according to him although cannot be used as a general theory, it can serve as a guide for researching *rationality* and *power*. He argued that institutions which represent the interest of the people may be protecting their own interest because of the power they possess. He established ten relationships between power and rationality from his "*Aalborg Project*" which he described as "*a metaphor of modern politics, planning and administration*" (Flyvbjerg 1998:318). He opined that rationality and power has an unbalanced relationship, and that power has a clear tendency to dominate rationality in the overlapping and dynamic relationship between the two. Three of his propositions are discussed here and will be used to guide data analysis due to their relevance.

Proposition 1: *Power defines reality* (Flyvbjerg 1998:319)

According to Flyvbjerg (1998:319), '*power concerns itself with defining reality rather than with discovering what reality is and therefore power defines what counts as rationality and knowledge thereby what counts as reality*'. In this thesis, the traditional council (chieftaincy institution) may make what is in its opinion, knowledgeable decisions due to its power and

position as the elders of the land often seen as an epitome of knowledge without necessarily going out ‘*there*’ to the ‘*real world*’ to find out how things are actually done or is (reality). Farmers may have their own view of reality, implying (multiple rationalities) but chieftaincy ‘reality’ may prevail over farmers’ reality due to the formers power. Reality here could be how chiefs from other areas engaged mining companies to benefit the farmers. It could be engaging mining expert’s advice in decision making.

Proposition 2: *Rationality is context dependent; the context of rationality is power and power blurs the dividing lines between rationality and rationalization* (Flyvbjerg 1998:320).

Unlike science which presents rationality as independent of context, Flyvbjerg (1998) proposed that rationality is a discourse of power and that rationality is context dependent and the context is power. He argued that power penetrates rationality and it’s difficult for governmental institutions to operate with rationality in which power is absent. For instance in this thesis, decisions made or taken by the traditional council as (rational) with regard to obstacles that hinder or constrain farmers access to royalties like land boundary conflicts may be a function of power with the intention to protect its own interest. The council’s interest to consolidate and protect its boundaries and influence may blur the lines between farmer’s rationality and chief’s rationalization.

Proposition 3: *The greater the power, the lesser the rationality* (Flyvbjerg 1998:321).

Building on Kant’s assertion that, power spoils the free use of reason, Flyvbjerg (1998) proposed that possession of more power appears to spoil reason even more. As discussed earlier on, one of the integral parts of rationality is the ability to define reality. The greater the power, the greater the freedom in this respect, and hence less need to understand how things are actually done (how reality is really constructed). In this thesis, power relations between chiefs and farmers may be such that, the former has more power than the latter. Farmers are subjects and they belong to different social classes. They may be culturally expected to be obedient to chiefs. This may even give chiefs more power in presenting their rationalizations as ‘rational’.

2.4 Culture

Culture is a sociological concept which has been conceptualized in different ways. According to Weber (1986), culture could be ideas developed and promoted over time by say rulers who seek to legitimize their rule or justify their privileges which have continued to influence the way things are done or social action. Culture therefore shapes action by defining what people do as rational and/or acceptable. By extension, it may be defined as the way of living of a group of people. It includes their customs, norms or accepted ways of handling everyday issues, peoples believe, and behavior. Generally this could be described as the accepted world view by a group of people. Culture according to the Livelihood framework stresses the importance of analyzing livelihoods within their cultural context, both locally and globally. Foucault (1983) conceptualized culture as a form of power and argues that ideas that shape individuals motive for action could be that of powerful groups say chiefs. For example what is the accepted way subjects must relate to chiefs? What is the relationship between chiefs and their subjects? Which institution is culturally considered as legitimate to lead its people say in mining?

According to Williams (1976), cultures must be analyzed within their contexts and conceptualized as how people relate with governance institutions. In an attempt to offer geographers a tool to analyze culture, Mamadouh (1999) provided the *grid group cultural theory* building on the work of Douglas (1978) *grid group analysis theory*. Basically they put culture at the centre of explaining social life. Theorizing different social environments or types of cultures (ways of life, rationalities), they argue that different cultures come with different interpersonal relationships as well as different behavioral patterns and biases.

One of such cultures they identified is the hierarchical culture which according to Douglas (1978) is a strongly incorporated group with complex structures. According to Mamadouh (1999) it is characterized by rules and standardized ways of doing things for which members of the group that do not endorse or follow the procedures and norms are seen as deviants. Trust is placed in authorities or institutions like chiefs but they can voice a cultural bias in their interactions with individuals or groups within the environment. Chieftaincy is conceived here as a local governmental institution which comes with norms and practices that may suppress farmers (subjects) rationalities. For instance, a chieftaincy sub culture of obedience (subjects should be obedient to the chiefs) that is seen as the right way people should relate with their

chiefs may hinder farmers ability to demand accountability or ask for representation. Chiefs are preservers of culture and tradition and they may preserve this because it may best serve their interest. A cultural system that makes it easier for the people to demand accountability from their leaders is more likely to make it responsive to them than that which does not.

2.5 Conceptualizing Chieftaincy (Culture and Power)

Chieftaincy is the oldest, resilient and most respected local governance institution in Ghana despite the fact that its impact, influence and effectiveness has dwindled by colonial rule and the return of the country to democratic rule in 1992 (Sakyi 2004:131; Boafo-Arthur, 2006). Even in its weakened state, it still remains a very important local governance institution which impinges both positively and negatively on majority of Ghanaians on daily basis especially in rural areas where government institutions are either not present or trusted (Brempong 2006).

Whiles chieftaincy or traditional leadership has received attention in Ghana and Africa as whole from scholars and researchers, policy makers, as well as development practitioners, there is an inherent problem of definition and theorization (Odotei & Awedoba 2006). This has largely been attributed to the dynamic nature of the institution as well as the differences in its usage in different areas in Ghana. Though my focus here is not about the definitional problems but its power, functions and relationship with its people, It will be apt to adopt Abotchie (2006:170)'s defititon of a chief as *“A person who hailing from the appropriate family and lineage has been duly nominated and enstooled, enskinned, or installed as a chief or a queen mother in accordance with the requisite applicable customary laws and usage”*. A chief has political, socio-economic and cultural power to regulate behavior, and enforce rules to ensure order in society as well as propel development in its area of jurisdiction (See Alhassan 2006; Seni 2006). Not all people can become chiefs, as one has to come from the ruling lineage.

Extending back to colonial times in Ghana, the role of chieftaincy in local government was evident in the British indirect rule system of governance where they used chiefs as agents of development (Arhin 2006) and contrary to the expectation of many theorist of the modernization school, it still remains a very important local government institution which runs parallel with the current formal district assembly system of local governance (Boafo-Arthur, 2006) in the areas of mining, agriculture and construction because *“they are revered as the custodians of the land”*

(Odotei & Awedoba 2006 :16). The “*resilience of the institution, its adaptability, maneuverability, insulation, and elasticity*” (Boafo-Arthur, 2006:145) has made it an effective institution for carrying out attacks on poverty (Addo-Fening 2006).

The 1992 constitution of Ghana explicitly recognizes chieftaincy as a local governance institution that can spearhead development in the new democratic era. It upholds the historic legitimacy of chieftaincy and guarantees its autonomy from state intrusions. The constitution explicitly forbids the abolishment of chieftaincy and it denies Parliament the power to legislate to the detriment of the institution (Sakyi 2004). The constitution of Ghana provides for an institutional arrangement that networks a large number of chiefs, from village up to paramount chiefs who rule over territorial units. Every Paramount chief presides over a traditional council, which is formed by his sub chiefs as well as the chiefs of all towns and villages under his jurisdiction. All paramount chiefs within a region constitute the Regional House of Chiefs. The ten Regional House of Chiefs network into a National House of Chiefs and its president ranks amongst top positions in the protocol of the country although the constitution prevents chiefs from taking part in active politics (See Rathbone 2006). The network of chiefs (the traditional council) is the highest decision making body at the local level.

However, according to Gyapong (2006), chieftaincy running parallel to the district assembly at the local level has led to a clash of powers especially in the area of land allocation as chiefs are culturally considered the custodians and hence the allocators of land and the district assembly also sees itself as having the political power. He argued that the multiple functions of judiciary, legislative as well as judicial and religious/cultural functions makes chieftaincy too powerful and violates the democratic process of separation of powers. The mode of appointing chiefs has also been questioned. Whiles Frempong (2006) argued that the process is democratic in the Akan communities in Ghana; He also observed that the same thing cannot be said for all other parts of Ghana and other parts of Africa. According to Valsecchi (2007), chieftaincy is a form of minority rule and at its best may just be a rule of a moderate majority.

The relationship between chiefs and their people has received attention in recent years in the areas of accountability, good governance, human rights, democracy as well as development. (See Abdulai 2006; Addo-Fening 2006; Perbi 2006; Frempong 2006 and Seni 2006). Though research has established that about 70% of people wants the institution to stay in Ghana (Abotchie et al 2006), there are concerns about chief’s involving their subjects in decision

making, their responsiveness, accountability due to the very nature of the institution across Africa (Ribot 2005; Ribot 2002a; Valsecchi 2007; Kassibo 2002a). In Ghana, Abotchie et al (2006) argued that, perceptions of chieftaincy vary across the country due to differences in ethnic histories and culture but are unlikely to remain static due to the effect of time and social change. Research in Ghana revealed that, over 80% people perceive themselves as subjects to chiefs (Abotchie et al 2006). This form of relationship between subjects and their chiefs, it has been argued does not enhance participation, responsiveness as well as accountability of chiefs especially in the case where they act as representatives of their people in resource management. In many parts of Africa, chief's accountability, responsiveness as well as the involvement of their subjects in decision making has been questioned. In Ghana, chieftaincy has its most profound control on people's lives in rural areas and semi –urban areas than in urban societies (Valsecchi 2007: 4). This is because rural communities adhere to cultural norms than urban areas and rural people deal with chiefs on daily basis unlike the occasional basis in urban areas.

Whiles Spierenburg (1995) argued that some traditional authorities are accountable; many other researchers claim they are not (Sakyi 2003; Valsecchi 2007; Kassibo 2002a; Thiaw & Ribot 2003). It has been argued that chiefs often inherit their positions and so they are not directly responsible to their subjects. Abotchie et al (2006) also argued that in Ghana, chiefs' resource base has been significantly cut by the state and one could say that if chiefs do not receive the necessary funding, it could give room for corruption especially when it involves projects in which they serve as representatives of their subjects. Valsecchi (2007) argued that chiefs either mismanaged resources meant for the people or they lack the administrative knowledge necessary to manage public resources. He argued that the hierarchical culture underlying chieftaincy is at odds with democracy and affects people ability to demand for accountability. To him chiefs are autocratic and chieftaincy democracy may best be referred to as 'palaver democracy' (Valsecchi 2007: 8) as they put the local people at side (patronage) in decision making.

According to Mamdani (1996), chiefs at times subject the local people to arbitrary use of power without representation or the right to complain. This means that issues of power and culture are worth investigating when one seeks to establish the role of chieftaincy in mining. According to Abotchie et al (2006), Chiefs are considered as the embodiment of culture and identity by their subjects and by that virtue, they are considered as the spokesperson or

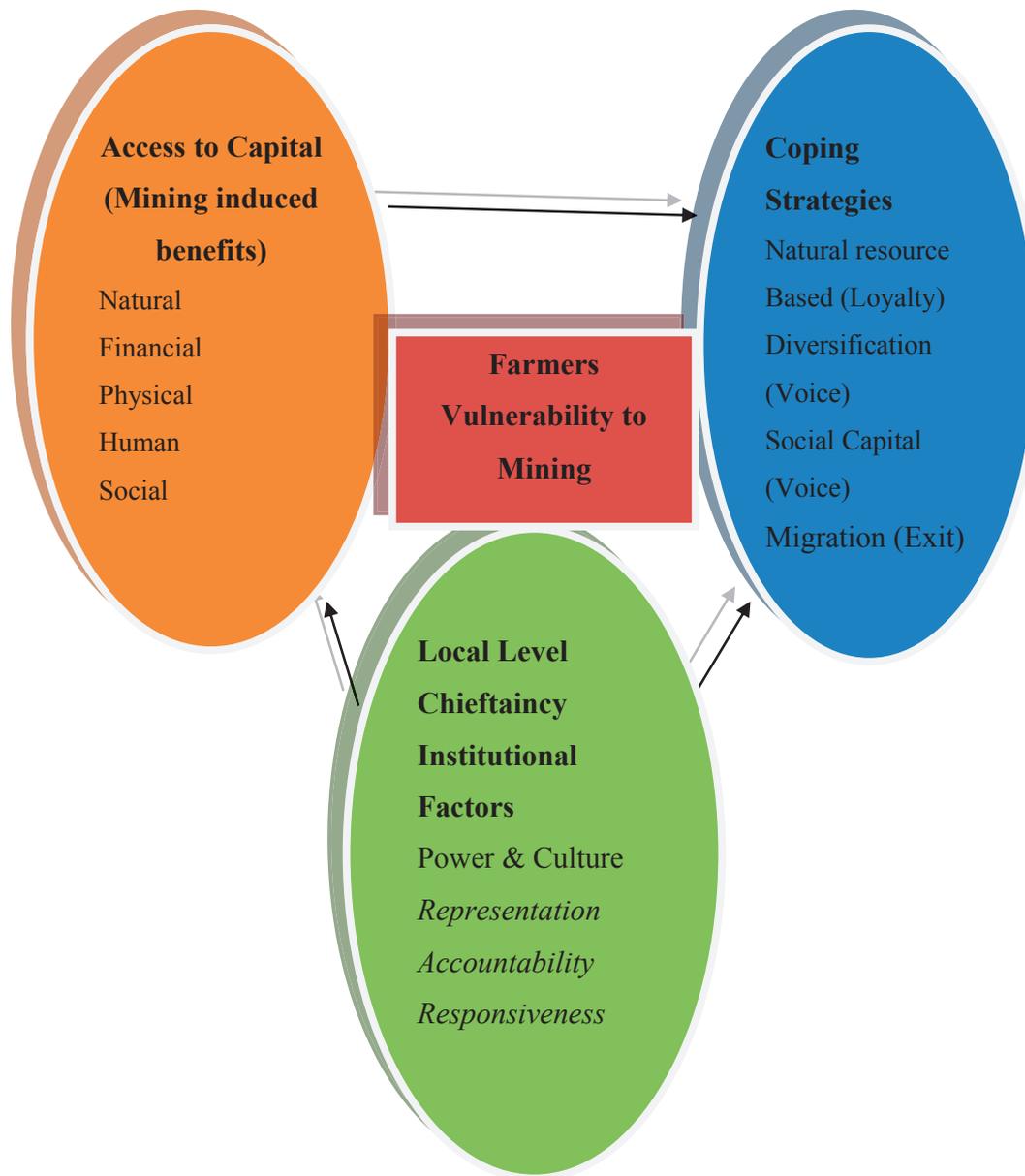
representative of their people often treated with respect and reverence. In some parts of Northern Ghana, chiefs are seen as divinities (Abotchie et al 2006). By extension one could argue that in situations whereby chiefs represent farmers say in mining, farmers may not be able to demand accountability or question their actions (Yaro, 2010). Traditional beliefs still persist in Ghana in spite of the spread of Christianity and other forms of beliefs. In some parts of Ghana, like the Krobo and Ga areas, chieftaincy evolved from priestly theocracy (Wilson, 1987). Chiefs are therefore revered as powerful in spite of the separation of chieftaincy from traditional priesthood. They are respected at all times to avoid curses and punishment from the Gods. It's also believed that chiefs are the mouthpiece of the ancestors and the ancestors can either reward or punish based on the relationship of people with their chiefs. Chiefs therefore hold some kind of 'immunity' to criticism. Chieftaincy is often approached from a variety of backgrounds and perspectives of culture, power, governance and development.

2.6 Analytical Framework

An analytical approach that incorporates the theories and concepts discussed above is used to guide the interpretation of data. From the discussions so far it could be established the position that no single theory can effectively explain how institutions (chieftaincy) constrain farmer's access to assets (mining induced benefits) and how farmers cope within their context.

As stated earlier on, the livelihood framework is the 'Meta' framework for this study. It states that, institutional factors may constrain or enhance people access to assets which intend influence their coping strategies. In addition to it, all theories and concepts will be used collectively to understand how these factors make farmers vulnerable in a mining context. The SL Framework, political ecology (Flyvbjerg (1998)'s) concept of power and rationality), the concept of culture as well as chieftaincy issues of participation, accountability, responsiveness will help to address the role of chieftaincy in mining and its effects on farmers access to assets (mining induced benefits). Fig 2 below summarizes the analytical Framework of the study. Assets are used here in the sense of mining induced benefits. Mining induced benefits such as royalties, employment, compensations among others could be conceptualized under the asset pentagon (natural, physical, financial, social and human) which farmers could deploy to pursue viable livelihoods in a mining context amidst the loss of land and economic activity.

Figure 2 Analytical Framework



Source: Authors own construct

From the diagram, chieftaincy power and culture determine farmers' representation in decision making, chiefs' accountability as well as their responsiveness to farmers. These institutional factors influence farmers' access to mining induced benefits (assets) as well as their coping strategies. The interaction between the three processes at the local level may influence farmers' vulnerability to mining or the extent to which mining will benefit or adversely affect farmers.

2.7 Document Review on Mining and the Link with Chieftaincy

2.7.1 Background

Mining is one of the oldest activity or industry in Ghana and the world at large. According to Boon & Ababio (2009:1), it is an economic activity that that consists of the extraction of potentially usable and non renewable mineral resources (excluding petroleum, natural gas and water) from the land without agriculture, forestry or fisheries. Coakley (2003)'s work on the minerals industry in Ghana classified minerals into two. These include metals (gold, diamond, manganese, bauxite) and industrial minerals (e.g. limestone, gypsum, clinker). Both are regulated by the Ghana Minerals and Mining Act, 2006. However, at the hub of mining studies in Ghana are the precious metals. Most mining studies have concentrated on gold mining in Ashanti and Western regions. (See Akabzaa et al 2008; Yankson 2010; Boon & Ababio 2009; Hilson &Yakovleva 2007; Hilson et al. 2007; Hilson &Potter 2005; Ayee et al. 2011). Studies involving the industrial minerals have largely been ignored; perhaps, researchers favor researching mining of precious metals than the industrial minerals say limestone.

Whiles some of these studies have primarily focused on the impact of mining on the economy of Ghana as a whole, other focus on host communities. Research has been conducted in the areas of corporate social responsibilities, Economic and environmental impacts, institutions regulating the mining industry of Ghana as well as the political ecology of mining in Ghana. In spite of the differences, the center of all this researches is the issue of mining and development. That is to say that, there is a perception that the extraction of a mineral from a region should offer the potential for growth and development.

The reality is however that, this is not always the case as it has tend out that mining at times perpetuates poverty and worsen the livelihood situation of local people mainly farmers. Many researchers blame mining companies for not being responsive to local needs and not giving back to societies in which they operate, but others also argue that for mining to benefit local people, it largely depends on the institutions that regulate the mining sector. Whiles many researchers (See Ayee et al. 2011, Hilson & Potter 2005) have investigated national institutions, laws and policies, local level institutions like chieftaincy which plays a major role in local people's access to mining induced benefits have been ignored (Yaro, 2010). This thesis therefore

narrows down to the local level to investigate the role of chieftaincy in mining and how it enhances or constrains farmer's access to mining induced benefits.

2.7.2 Mining, Livelihoods and Poverty reduction

Research has showed that mining has had diverse impacts on Ghana. According to Wall & Pelon (2011:6), mining projects can contribute to development through a number of channels ranging from royalties, training & employment, corporate social responsibilities e.g. (infrastructural development) and alternative livelihood programs, compensations, community investments, government revenue among others. For example Coakley (2003)'s work revealed that for the last ten years or so, mining and quarrying accounted for approximately 25% of GDP and about 10% of government revenues as well as providing employment to a sizeable number of Ghanaians.

However according to Boon & Ababio (2009:2), despite the revenues that Ghana derives from mining activities, there is an increasing dissatisfaction in line with the real benefits that ordinary Ghanaian mostly in mining communities enjoy. Akabzaa & Darimani (2001:4) argued that a thorough cost/benefit analysis of mining on Ghana would probably show a negative figure. In other words the positive relationship between mining and development has been questioned (Yankson 2010). Generally this phenomenon has been conceptualized as resource curse (Yankson 2010).

In an attempt to explain this negative relationship several factors has been raised. In the first place, it has been established that structural adjustment and market liberalization policies (SAP) championed by the Breton woods institutions and Ghana's subsequent adoption and implementation of such programs in the 1980's has favored the expansion of mines with little interest in their regulation. This they say has favored foreign and large scale mining over indigenous small scale mining (See Hilson & Potter 2005; Ayee et al. 2011; Hilson et al. 2007). In their work they found out that, the introduction of SAP have impoverished and marginalized local people because it favors multinational mining companies.

It has also been argued that the amount of compensation that is paid to mining affected people in mining communities is woefully inadequate. Compensations normally take the form of cash whereas people may prefer alternative land or other things they deem appropriate (See Wall & Pelon 2011 Akabzaa & Darimani 2001), According to Section 74 (2) of the Minerals and Mining Act 2006, Act 703, in the case of compulsory acquisition of land, *prompt* payment of *fair*

and *adequate* compensation shall be made. Since the law fails to provide an effective and incontrovertible way out, mining companies normally have to negotiate at the local level, but local politics normally leaves land owners with meager compensations (Ghana Chamber of mines 2010; Ocran 2010, Yaro 2010). Yaro, 2010's research in the Brong Ahafo region of Ghana highlighted how local politics between chiefs and the people determines who gets what, when and how. Her work indicated that chiefs and the elders of mining communities benefit at the expense of landowners, which have made farmers livelihoods vulnerable.

Again research has showed that mining benefits local communities through corporate social responsibilities of mining companies. Companies are recognizing that improving their own impacts on mining communities and addressing wider social and environmental challenges of the communities in which they operate will be very crucial for their success (Boon & Ababio 2009:2). According to Anyemedu 1992 cited in Akabzaa & Darimani (2001:34), since mining projects are located in remote areas, mining companies have had to invest considerably in both physical and social infrastructure such as hospitals, schools, roads, electricity pipe born water etc in the Tarkwa region, to compensate for negative impacts like noise, air and water pollution, roads destruction among others. This means that mining can provide other forms of capital in the form of corporate social responsibilities that local people can deploy to pursue viable livelihoods. According to Wall & Pelon (2011), this may be mandatory or voluntary and that means it requires proactive leadership at the local level to effectively engage, negotiate and strike deals with mining companies, without which companies may decide not to give back to the communities.

The implication is that the effectiveness or otherwise of local leadership, (mainly chiefs) to engage mining companies operating within their jurisdiction can enhance or constrain local people's chances of getting access to this benefits. For example according to Boon & Ababio (2009), some companies set up Trust funds to ensure adequate funding for their corporate social responsibilities towards host communities through dialogue with local leaders. E.g. Goldfields Ghana established a foundation and commits nearly USD 1 million per year for financing social investments. There can be different impacts on different mining areas based on the degree of engagement between local leaders and mining companies.

Another major channel through which mining impacts on the Ghanaian economy is through the payment of royalties. According to the International Monetary Fund (2004a§) cited

in Coakley (2003:17.1), “under Article 22 of the Minerals and Mining Law, mining companies are required to pay no less than 5% and, depending upon their profitability rate, up to 12% of their gross revenues as royalties.” (Coakley 2003:17.1). While this amount is very meager, twenty percent of it is used to fund national public institutions that regulate the sector. The remaining is transferred to the Office of the Administrator of Stool Lands to be distributed to the mining communities (Coakley 2003). The Office of the Administrator of Stool Lands retains 10% and distributes the remaining 90% to local authorities (chiefs) for development projects as well as providing alternative livelihoods to the affected people in the mining communities (Coakley 2003:17.1) This is normally channeled through the chieftaincy institution otherwise known as (traditional council). However according to Coakley (2003), the IMF review noted that revenues are not always used to benefit the mining communities and those adversely affected by mining.

This has generated a lot of arguments as there are calls for the need to increase royalties mining companies pay to local communities. While the Ghana Chamber of Mines believe that the increase in royalties will help mining communities to embark on development programs that will improve their livelihoods; the Ministry of Lands and Natural Resources also think that, the problem is not about the sufficiency of the amount that is paid, but how efficient the money paid is used by traditional authorities (chiefs) and the district assembly at the local level. The implication may be that, the probability of royalties paid by mining companies to benefit the local people could be a function of the relationship between chiefs and the people at the local level. If chiefs are responsive and accountable, farmers may benefit. This could also imply that, when chiefs are engaged in land litigations over the ownership of a mining concession with another traditional council, it could serve as a barrier to farmers accessing royalties.

Employment to local people is one of the key ways through which mining could benefit local communities. However, there has always been a bond of contention between local people’s expectations of employment opportunities and mining company’s ability to employ them or provide a viable alternative to take care of their plight of loss of livelihood activity normally farming or small scale mining. Yankson (2010)’s work “*Gold mining and corporate social responsibility in the Wassa West district, Ghana.*” revealed that while loss of land had aggravated poverty and unemployment in the area, mining offered very limited wage-employment opportunities and that poverty has increased than before (Yankson 2010:356).

Among reasons sighted was the fact that mining favored skilled labor to the disadvantage of unskilled labor, a category in which most rural communities largely fall in. His work however revealed that, mining companies working in the area sometimes sponsored some of the local people so that they could become employable in the mining sector. Local people's access to employment can therefore be regarded as a key asset that can help them acquire other assets to cope in a mining context. What it didn't tell us is whether this was as a result of local authorities' engagement with mining companies or as a result of their own decision. Yaro (2010) therefore argue that there is the need to delve into how mining benefits are negotiated at the local level.

2.7.3 Regulating Mining in Ghana

For mining to be beneficial to a country or the region of extraction, it needs vibrant institutions that will make policies, laws and legislations that will pursue the agenda. The effectiveness or otherwise of this institutions will have a great deal of impact on mining and local development. Coakley (2003)'s work on the mineral industry of Ghana highlighted government policies and programs that legislate the mining industry in Ghana. Currently, mining is regulated under the Minerals and Mining Act 206 (Act 703) (Coakley 2003:17.1).

This legislation stipulates which institution does what, who gets what, and how. The Ministry of Lands and Natural Resources oversees all aspects of the mineral sector and is the grantor of mineral and mining leases. Within the Ministry, the Minerals Commission has responsibility for administering the Mining Act, recommending mineral policy, promoting mineral development, advising the Government on mineral matters, and serving as a liaison between the industry and the Government. The Ghana Geological Survey Department conducts geologic studies, and the Mines Department has authority in mine safety matters (Coakley 2003:17.1).

According to the mining laws of Ghana, *“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 an 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”* (Ghana Minerals and Mining Act 2006). In this regard, the ministry of lands and Natural Resources grants mining leases on behalf of the president. However, in an attempt to decentralize the regulation and governance of mining in Ghana, the laws are drafted in such a way that, it gives some degree of

autonomy to local institutions (chieftaincy) in the areas of negotiating for compensations, and other related mining induced benefits in the spirit of local differences. Several studies have been conducted on institutional constraints and its impacts on mining. Whiles Hilson & Potter (2005) and Ayee et al. (2011) indicate a depth of research on mining laws; policies such as mining sector reforms, structural adjustment and how these affect the impact of mining on Ghana, the role of local institutions (Chieftaincy) have largely been ignored. For instance Hilson et al (2006) argues that laws concerning land rights and how government acquires and grant mining licenses affect local communities. As indicated above, all minerals are entrusted in the care of the president and mining licenses may be granted at the national level without the involvement of the local people. Land rights of people is not protected “*The farmer or entrepreneur who claims land under one property rights system can never be certain when (or if) others will challenge his claims; neither can he predict whose claims the local community or state will uphold*”. (Firmin-Sellers 1996 cited in Hilson &Yakovleva 2007:100).

Similarly Kasanga & Kotey (2001) argues that, a plurality of land tenure and management systems (i.e. state and customary) prevail in Ghana and these systems are poorly articulated and increasingly cause problems of contradiction and conflict. According to them, whiles a substantial amount of land has been compulsorily acquired and vested in the state, and managed by the lands commission, public local institutions like the chieftaincy institution still exercise extensive control in the customary sector and this affects the ordinary people in the communities. It creates a problem whereby farmers and landowners lose their land to mining companies without adequate compensation or agreement. Private landowners are hardly involved in the process leading to the award of their land as mining concessions. Mining companies get the rights through the state whiles they subsequently negotiate with traditional leaders for other benefits. The private land owner loses his property without a regard to his livelihood and that of his future generation. This affects their access to resources to earn secured lives.

Hilson et al (2006) highlighted how the transfer of land rights to mining companies without the consent of land owners triggered conflict between small scale miners locally known as (*galamsey*) and mining companies in Prestea, Ghana. His work observed that, indigenous *galamsey* miners were illegally mining on the concessions awarded to Bogoso Gold Limited (BGL), a Canadian mining company on the premise that, there are few alternative sources of local employment and that they were not consulted before the concessions were granted to the

company by the minerals commission. Their study also blames government policies such as mining sector reform which prioritizes large-scale projects and argue that it has neglected the concerns of indigenous subsistence groups and make their livelihoods vulnerable.

Ayee et al. (2011) studied the role of public sector institutions and argued that the institutional set up and the political environment are central to understanding and rectifying the poor impact of mining on Ghana's economy. In their work, *'the political economy of the mining sector in Ghana'*, they highlighted the vulnerabilities in the mining sector governance along the industry value chain and explained why it is difficult to implement policies that will improve social welfare. The governance extends from the president to the chiefs (traditional councils) (Ayee et al. 2011:12). Their work revealed that an excessively centralized policy making process, lack of transparency and weak institutional capacity at the political and regulatory levels are the main reasons for the negative impact of mining on the national economy as well as the local level. It argued that in spite that these institutions are often seen as democratic, power seems to be overly concentrated in the institutions that govern the sector and which have no direct accountability to local people. There is therefore need for checks and balances to enhance accountability as well as capacity building at different levels of institutions to improve the institutional performance if the country is to benefit from mining (Ayee et al. 2011). Although their work recognized the role of traditional authorities and noted that chief have been the direct recipients of mining benefits from mining companies and that the better their terms of engagement with mining companies, the higher the benefit they receive, chieftaincy wasn't their main focus. Nonetheless, it shows that there is the need to focus on chieftaincy and local people access to mining induced benefits.

2.7.4 Chieftaincy and Mining

As discussed earlier on under sub headings 2.5 and 2.7.3 above, Chiefs wield a lot of power and have control over land at the local level. They are regarded as the custodians of the land. The institution holds land in trust for its people and it is the only institution with the legitimacy to allocate land for projects like mining. According to Kasanga & Kotey (2001), customary ownership still persists in Ghana and both privately owned lands and stool lands still remains under the control of chiefs. According to Bob-Milliar (2009) Eighty percent of land in Ghana is held by the various traditional authorities in trust for the subjects of the stool/skin in accordance

with customary law, and central government has 10 percent for public development (Bob-Milliar 2009:543). Chiefs are the custodians of resources within their respective jurisdiction and they have controlled and regulated mining operations within their lands over the past two centuries (Aryee & Ntibery 2003).

The Minerals and Mining Act 2006 has been drafted in such a way that, it gives some authority to local leadership to negotiate for adequate, fair and acceptable compensations, engage mining companies to embark on economic and social programs that will benefit their people as well as access royalties to redistribute for the development of mining affected areas within the jurisdiction of the stool or the skin. However, Ayee et al. (2011) argued that the traditional system is highly ingrained with respect for authority and the subjects are not accustomed to questioning authority. This may affect accountability, representation as well as responsiveness to their people.

In spite of this while several studies have been conducted on the reasons why mining most adversely affect the livelihoods of host communities, less has been said about the very important but in one way or the other indirect role played by chiefs at the local level and the politics of who gets what, when and how (Yaro, 2010). Against the background of the above discussions, this research aims at narrowing down to the local level and establish how chieftaincy institutional factors of power, culture of obedience, responsiveness, accountability affect farmers access to mining induced benefits using the case of Limestone Mining in Manya Krobo.

3 METHODOLOGY AND THE RESEARCH PROCESS

3.1 Methodological approach

According to Straus and Corbin (1990), the manner in which social reality is conceptualized and studied is methodology. Social research requires a well defined methodology to achieve rigorous results. Methodology therefore can be defined as a way to achieve information and knowledge. According to Saks & Allsop (2007), certain rules and procedures must be followed in order to develop knowledge through research and this is the methodology.

The choice of a particular procedure or methodology to a large extent depends on the objectives of the enquiry or the research. This study employed a qualitative approach following the research objectives as it seeks to study the impacts of the limestone mining on the livelihoods of the host community with the main focus on impacts on farmer's assets and the role of chieftaincy as a mediating local level institution and how it affects farmer's access to mining benefits. The nature of the research questions requires methods that are close to life world experiences that can capture insight into people's life world; their meanings, opinions, culture, power relations, feelings, emotions, experiences and skills.

3.2 Methodological Justification

Qualitative approach is a very important technique for formulating and producing data in the field. It is closer to life world experiences and interactions which interpret and attempt at understanding and analyzing phenomenon and events more closely through human experiences. According to Flick (2009), qualitative methods are relevant to the study of social phenomenon due to the plurality of life worlds, which requires an approach that recognizes the diversity of milieus, lifestyles, feelings, motives and behavior.

The qualitative methodology was adopted because the study sought to find out impacts of limestone mining on the livelihoods of farmers in the host community. It seeks to identify the effects of chieftaincy as a mediating institution and how this impacts the livelihoods of farmers in mining communities and how they cope in order to suggest interventions on how to make the mining more beneficial to local people especially farmers from their perspective. The qualitative

method was therefore the best method for the study since it allows social actors themselves bring to particular social interactions and understandings from what is studied (Payne & Payne, 2004). It allows people to narrate their stories and also allow researchers to solicit opinions and perceptions of informants about a subject of inquiry. According to Limb & Dwyer (2001), it allows subjective understanding of knowledge through an in-depth understanding of phenomenon. This is also known as ethnography (Crang & Cook 2007) and it allows researchers to gain knowledge based on perceptions and in the process addresses issues taken for granted by quantitative researchers.

Qualitative research methodology has been criticized for a number of reasons. Among them are that it is based on small sample sizes and it may be difficult to generalize findings. It has also been argued qualitative research findings may not be truthful because it is based on the mere use of conversations as knowledge. These issues will be returned to later under sub section 3.10 below. In spite of some of these limitations as may be expected, it was the best method for this work since the researcher wishes to tell the stories of the farmers based on their perceptions, experiences and rationalities.

3.3 Choice of informants and data collection sites

Both primary and secondary data was used for the research. According to Kitchin & Tate (2000), the selection of respondents (primary and key informants) should be based on how relevant their thoughts and opinions are relative to what the researcher is interested in. Purposive sampling was adopted in this regard with the help of my gate keeper. A gate keeper is a person who controls access to something. My gatekeeper was an elderly man who has very good knowledge about the mining activities, chieftaincy, land owners and farmers.

Given the objectives of the research, a small but carefully selected sample of primary informants using the purposive sampling technique was used based on age and land ownership. Most of the primary informants were in their middle ages (36-50 years) and old age (51+). This was because, only few young people (20-35 years) owned land or were head of households. The older farmers also have relatively more knowledge about chieftaincy and its effect on livelihoods in a mining context. Also, there were more men than women because, only few women privately owned lands or were head of households. This is illustrated in Table 1 below.

Table 1 Primary Informants by sex, age group and land owner status

Sex/Age	Relatively Young (20-35 years)		Middle Aged (36-50 years)		Old (51+) years		Total
	Land Owner	Not Land Owner	Land Owner	Not Land Owner	Land Owner	Non Land Owner	
Male	2	2	4	6	5	3	22
Female	1	0	1	3	3	4	12
Total	3	2	5	9	8	7	34

Although no particular scientific research has been conducted on this particular case, secondary data was collected from newspapers, internet and documented evidence from similar mining cases in Ghana such as Obuasi, Tarkwa, Nsuta, where large scale mining has been going on over the years as well as some other parts of Africa. Literature on chieftaincy was also reviewed from documented sources in Ghana and other parts of Africa and linked to mining. Secondary data is relevant because it helps among other things in the arguing for trustworthiness of research findings and it puts them into a wider perspective.

3.3.1 Informants Characteristics and Sampling Procedure

Primary data was collected from a total of 44 informants comprising of 34 primary informants and 10 key informants between 15th June 2011 to 14th August 2011 at Bueryonye and Odugblase villages in the Manya Krobo district of Ghana. 16 primary informants were selected from Bueryonye village while 18 were selected from Odugblase village. The two villages which are normally referred to as the 'twin villages' due to their proximate location were selected for the research because, both villages are very close to the mine site although Odugblase is the host mining town, land owners from both villages have lost their land to the same concession. It was therefore important to stratify sample from the two villages to enrich the data (See Table 1).

Primary informants basically comprised of farmers. They include land owners and non land owners. The primary informants were made up of 12 women and 22 men. There were more men than women because most men lost land to Ghacem. The men are the head of the households and they own most of the land that have been lost to Ghacem. Primary informants

were between the ages of 20 to 74 years. In the field church elder, (Church of Pentecost) for the Bueryonye-Odugblase villages Mr. Samuel Ohipeni was my gatekeeper. He facilitated contacts with most of my primary and key informants. Prior to my trip from Norway to Ghana, I was in contact with him. I informed him about my intention to carry out a research on the topic and he was enthused about it. He therefore took the lead to inform the farmers so in fact, they were all expecting me. Perhaps this process has been quite smooth because I am a krobo by tribe and they see me as one of their own.

On my arrival in Ghana, I went to meet the gatekeeper in person and further discussed the project with him. He took me to meet the village chiefs and elders of the studied communities. After the necessary arrangement were made i.e. submitting a bottle of schnapps each to both chief's of the villages involved, I got the permission to carry out the research and specific dates were fixed for interviews and discussions although there were some modifications in interview appointments afterwards.

Key informants were 10 in number. They included 8 men and two women. The district planning officer for the Manya Krobo district assembly, the acting president of the traditional council (Chieftaincy institution), the assembly man for the Bueryonye-Odugblase electoral area, the village chief of Odugblase, one opinion leader each from the two villages, two representatives from Ghana Cement Company and women leaders from both villages. This people were selected due to their experience and the broader knowledge they possess on the issue of enquiry. Some key informant interviews were delayed and became possible only after my arrival in Norway through the phone.

3.4 Primary Information Collection

Due to the fact that this was a social research involving different actors and stakeholders, a triangulation of qualitative methods or tools were used to collect data to achieve the objectives of the research. I employed observation, interviews (with the help of a semi structured interview guide) and focus group discussions with the informants. Two separate focus group discussions were held, one in each village. Photographs of some scenes and activities deemed important were also taken. All these methods were complementary. This is explained below

3.4.1 Interviews

This tool is about listening to what people say and being non-judgmental. It involves talking with people in ways that are self-conscious, orderly and partially structured (Clifford, French & Valentine, 2010). It is basically an interaction between the interviewer and the interviewee but different from a mere conversation because it involves a set of assumptions and understandings about the situation which are not normally associated with a casual conversation. The interviews aim at allowing interviewees to construct their lived world experiences, opinions, perceptions and feelings. At the household level, farmer heads of the households were asked specific questions in relation to their livelihood vulnerabilities, impact of mining on their assets, and their opinions about the role of the traditional council (chieftaincy institution) in the mining process and the effects on their livelihood as well as their coping strategies. The district planning officer, the assembly man for the Odugblase-Bueryonye electoral area, the acting president of the traditional council, the village chief of Odugblase, two opinion leaders from the villages, a representative from AJ Fanj (A subsidiary Arabian firm that mines the limestone for Ghana Cement Company, a representative of Ghacem, women leader each from both villages as mentioned under key informants earlier were also interviewed for their perception about the impacts of the limestone mining on the mining community and the district as a whole as, the role of the traditional council, culture and power relations as mediating institution and processes.

Since in qualitative research informants are chosen as an indicative rather than representative sample (Gatrell and Elliott, 2009), 44 informants comprising of 34 primary informants and 10 key informants were interviewed. With the help of my gatekeeper, interview dates were fixed with 18 primary informants from Odugblase village and 16 from Bueryonye village. There were two interview guides for primary and key informants. See appendix. These were the interview guides for the head of households who are mainly farmers. The other was for key informants. Semi structured interview guides were used and this allowed discussions to be in the form of conversation and that allowed me to explore in greater depth all the topics of interest. The main topics covered in the interviews included informant's background, experience, knowledge and perception about the impacts of mining on local livelihoods and the role of the traditional council.

In qualitative research, knowledge production depends on the relationship between the researcher and the researched. I am a Krobo by tribe and I am very familiar with mining and chieftaincy issues, so I am quite an ‘insider’ who is aware of some of the cultural processes and the way of life of people. I capitalized on this to my advantage although I tried my best to play the outsider role so as not to alter peoples lived experiences and perceptions. I therefore oscillated between being an insider and an outsider and the continuous change of role throughout the process was very crucial to accessing richer information. In that regard also, I did not require the services of an assistant because I read and write krobo language very well. There were less interpretational problems. In spite of the fact that I am sort of an insider, I explained to them that I am the student and they are the teachers. I made them to understand that, it is because they have a better understanding of the situation or subject matter than I do, that is why I was there to learn and acquire knowledge from them. I made them understand that, it is their experiences and perceptions that I am interested in. This was to prevent the impression that I was more knowledgeable than them which might hinder free expression of perceptions, experiences and situations are they were.

I initiated each interview with an introduction of myself and the topic I’m researching and that they have the free will to participate or not to in the research and that they can also withdraw at anytime that they want if they want to do so. I assured them that all information that will be given to me will be treated confidentially. I asked for permission to use a recorder and take pictures where necessary. The period was the planting period for the minor farming season so some of the interviews were conducted in the evenings. Nonetheless, it went well. Informants decided on all venues for the interview. Most interviews took place in the homes of the interviewees’, mining site, and offices of respondents as well as public meeting places. The settings where the interviews took place had some impacts on the quality of information received with the most suitable place being the community center. The community center was the most suitable because I was able to conduct uninterrupted interviews. This allowed maximum concentration on the part of the informants. Farmers talked about impacts of mining on their assets and the role of chieftaincy.

Key informants gave specialist and broader knowledge as said by (Mikklesen, 2005). The acting president of the traditional council and the district planning officer was interviewed to find out the role played by the traditional council and the district assembly and how it affects farmers

access to mining induced benefits in the mining communities studied. Key informants including the assembly man, the village chief of Odugblase and women leaders were interviewed at the community center to get some specialist knowledge on the issue. The representatives from Ghacem and traditional council were however interviewed on phone due to their busy schedules. Both primary and key informants illuminated the topic and gave me detailed information on the issues being researched. Interviews lasted for 40 minutes to 1 hour although some informants spoke for longer hours. All the interviews with exception of the village chief of Odugblase, a key informant were audio recorded and transcribed verbatim afterwards. Interviews with the chief of Odugblase were transcribed directly during the conversations because he did not want his voice to be recorded since it can affect his position. He explained that it will not be good to record the voice of a chief on a very sensitive issue like the one under inquiry.

3.4.2 Focus group discussion

Like the semi structured interview, a Focus Group Discussion involves holding a conversation with people in an informal tone. The group usually comprises of 6-12 people. Focus groups consist of relatively small groups of people who are brought together by a researcher who appoints a ‘moderator’ (from among them) to explore attitudes and perceptions while the researcher stays behind to listen to them but occasionally ask questions when he needs further elaboration of a particular issue (Crang and Cook 2007). Focus groups are vital to understand how people work out their thoughts and feelings about certain matters in social contexts. During a focus group session, the participants are encouraged to discuss the topic themselves, and to share and compare different experiences and thoughts and this helps the researcher to understand the reasoning behind the views and opinions that are expressed by group members. *“It provides the researcher with a method of investigating the participants’ reasoning and means for exploring underlying factors that might explain why people hold the options, perceptions and things they do”* (Denscombe 2007:179).

With the help of my gatekeeper, I was able to identify land owners who have lost part or all of the mining concession. These landowners who are part of the ordinary 34 primary informants were informed to assemble for a discussion that concerned the very core of their existence, and issues concerning their losing of the land to the mining firm, the role of the

traditional council. Two focus group discussions were conducted, one in each of the communities under study.

Participants who took part in the group discussions at Odugblase were 10 land owners and they were within the ages of 35 to 70. Eight of these land owners also took part in the household interviews mentioned earlier. The reason for their participation in the focus group discussions is based on Kitzinger (1995) position that focus groups enable researchers to get information privy to them in one to one interviews. The discussion was held under a big tree at the heart of the village where the community gather for communal meetings. The discussion took place on a Wednesday afternoon due to the fact that they don't go farming on Wednesday in the village. The venue and time for the discussion was actually agreed upon together with the participants. In Bueryonye village, 6 land owners from the ordinary 34 primary informants took part in the discussions. These people also took part in earlier household interviews. The discussion was held on a Sunday afternoon after church service in front of the Pentecost church near the main Assesewa highway.

The discussion at Odugblase was the first to be conducted before I proceeded to Bueryonye village. Discussions ran through a series of debates and exchange of ideas among the participants. My role was mainly, standing back after the moderator introduced them to the topic for the discussions and allowed them to discuss among themselves. With my tape recorder, I recorded the conversation and also took some notes. Topics discussed included the impacts of the transfer of land rights to Ghacem on their livelihoods and also how the activities of the mines benefit or adversely affects their assets. The role of chieftaincy in the mining process was also discussed. To them as landowner, their livelihoods depend on the availability of land and its accessibility. In a mining context, it implies accessibility to mining benefits; alternative livelihood activities will be assets they will deploy.

They discussed about procedure of land acquisition, role of traditional council as the negotiator for compensation, social responsibility, royalties and redistributors of mining induced benefits. They also discussed about power relations between farmers and chiefs (traditional council) as well as chieftaincy culture of obedience to chiefs and how this affects them in expressing their views about the impact of mining on their livelihoods as well as demanding for representation and accountability. The discussions lasted for one hour thirty five minutes at Odugblase and one hour twenty minutes at Bueryonye. At both villages I observed that some

participants were more active than others and so I assured them that if they express a personal feeling or reveal some aspect of their personal life or perception about chiefs during the discussion such information will be treated confidential. This was to make them open up and establish trust between us. I observed afterwards that, there was more participation on the part of all the participants and that gave me broad insights into the subject of inquiry. I also realized that landowners felt more comfortable talking about their situation together than individually. However, I observed that participants views expressed were reasonably not much distorted as they were not so different from what came up during the household individual interviews and my personal observations.

One advantage of this method is that, it makes it easier for the participants to talk about common interests, concerns and also about issues that they might otherwise feel is too embarrassing or not culturally accepted to talk about individually. Issues about chieftaincy and how it affects mining on their livelihoods were better to talk about in a group because of common opinions and interest which empower them to talk about it as a group. It exposes significant differences among group members and also shows the researcher significant agreements of group members on a topic of enquiry.

One major challenge with this method was that sometimes the more powerful land owners and elderly, thus those who have some level of education and lost larger tracts of land tried to impose their views on the others and they have to deliberate and argue for sometime before they came to consensus. This may suppress the voice of less dominant participants. But for time, the focus group discussions should have been conducted based on the age, size of land, level of education to avoid the power struggle but notwithstanding this, the information acquired through the process to a large extent depicts reality as it did not vary too much from information that came up during the household interviews and personal observations.

3.4.3 Direct Observation

This is the process of systemic observation of event's processions with a view of collecting information relevant to the topic been researched. Being a participant observer implies an immersion of the researcher's self into the everyday rhythms, culture and routines of the community, A development of relationships with people who can show and tell the researcher what 'is going on' there and through this, an experience of a whole range of relationships and

emotional states that such a process must inevitably involve (Tedlock 1991, cited in Crang and Cook, 2007:37). Also as an insider, the researcher can interpret 'the physical, natural and social situation, cultural traits of people through observation.

The tool was used to collect and cross check information. It could be used by itself, but here, it was used with a combination of other tools, and it helped to fill in the gaps left during the application of other methods. It is also used to detect non-verbal signs which help to assess the reliability of the respondent. According to Gatrell and Elliott (2009), it is common to classify observation into participant and non participant observation. The former involves full scale participation in the research nexus while the latter entails researcher embedding into a research situation in an unobtrusive manner that does not obstruct the situation being observed.

In this regard, both methods were used for the data collection. I visited the farmlands of the peasants to observe for myself how the mining activities impact their crops and the land in general. I must state that most of the crops were either covered with dust or have turned reddish brown in color. I visited the mining site to have at first sight how the land was being used, how they went about their mining activities, observe for myself some of the issues that came up during the interviews. The farmlands of farmers and land owners were also visited to ascertain at first hand the impacts of the mining on their land and crops. During the interview of the household heads, I also did some partially covert observations as to what the household have or does not have. I also observed housing quality, cracks in buildings due to the shock waves from the use of dynamite for blasting the stones which came up during the interviews. In all the observations, I tried to reconcile some of the information that came up during my interviews and discussions with what I've seen in order to reconcile the two to sieve out discrepancies. This is because the business of people observing people may be very challenging due to the fact that people may pretend or change behavior when they know they are being studied.

But disadvantage of this method is that, it does not give an understanding of the reasons behind what people do or why things are as they are and as such being aware of this, I complemented this with focus group discussions and interviews without drawing hasty conclusions.

3.5 Ethical Consideration

According to O'Connell et al. (1994:55), '*Research ethics are concerned with the conduct of researchers, their responsibilities and their obligations to those involved in the research, including the general public and the subjects of the research*'. In order to be ethical in the study, certain principles were adhered to during interviews, discussions and observation. According to Silverman (2006), researchers must be sincere with informants about the aims of the research. I explained the aims of the research to my gatekeeper who facilitated access to the village chiefs. Permission was granted for the research.

During the data collection, I initiated each interview with an introduction of myself and the topic I'm researching and told informants that, they have the free will to partake or not in the research and that they can also withdraw at anytime that they like. I assured them that all information that will be given to me will be treated confidentially. I asked for permission to use a recorder and take pictures where necessary. I did some partially covert observations during the interview of household heads at their homes and also during the visit to the farms of some of the farmers. I must state that all those observations were kept confidential especially when it did not match results from earlier information provided by the informant.

3.6 Researcher's position and reflexivity during primary data collection

According to Hartsock (1987:188) a researcher's position within various power structures '*privilege certain voices over others*' and as a researcher, there is the need to take note of your position relative to that of the respondents. Despite the fact that I am a Krobo by tribe and quite abreast with the local culture and way of life of the people, it nevertheless gave me 'insider' status as my position continued to oscillate between an insider and an outsider. Being aware of this role and change of role, attempt was made not to alter people's lived experiences and perceptions in order to access the information needed.

I constantly assessed my position to make sure that I do not intimidate my respondents. As a master student and especially coming from abroad, the respondents at times felt that I am a beacon of knowledge. However I continuously reminded and made them aware that, they are knowledgeable and they have more expertise in the issues being discussed than I do, and that is why I am here to learn from them because they are '*experts on their own lives, culture and*

institutions'. I did this to create conducive environment for exchange of knowledge. I probed more only to verify and get in-depth knowledge and information, but not to challenge their views, experiences and perceptions.

I was also aware of my epistemological position and oscillated between *structuralism* and *interpretivism*. Interpretivism epistemologically contrasts positivism (Bryman, 2008). It favors subjective interpretation of social reality by people that is to say how farmers interpret the world around them. This may be influenced by their personal as well as institutional factors such as traditions, culture, norms etc. which may differ over time and across space. Structuralism ontologically assume that there are a set of macro scale economic, social and political structures and processes that shape people's life but that this are mediated by human experience (Bryman, 2008).

3.7 Secondary Sources of Data

Secondary data was collected from articles, scientific journals, the internet and newspapers on the topic. Although there had been no previous scientific research conducted on the Limestone mining at Manya Krobo, quite similar researches have been conducted on mining and its impacts on the livelihoods of the local community in Ghana. For example, there is a lot of literature on gold, diamond and bauxite mining in Obuasi, Prestea, Tarkwa and other areas in Ghana and although their values may differ, the processes involves may not vary so much. Though there are no many researches on the role of chiefs in mining and how this affects the livelihoods of mining communities, there is a lot of literature on chieftaincy as a local institution in Ghana in the areas of accountability, democracy and resource management. Secondary data was discussed and references were made to this effect.

Secondary data is useful because it helps to compliment primary data in a research. According to Mikkelsen (2005), secondary data provides wealth of information from different studies that can be utilized to re organize, mould and understand the existing research study. However, secondary data are limited in the sense that, they are cultural products which might make it difficult to be adopted by a researcher or sometimes unsuitable for a particular topic within a different context. Sometimes, secondary data might also be limited because it might be poorly documented. Some of the secondary data I collected were from brochures of the Ghana

cement factory, newspapers, mainly the Daily Graphic (national newspaper), official government website on districts (www.ghanadistricts.gov.gh) and the Chronicle news papers as there were several headlines on the topic. I however had in mind that some of these newspapers may be censured but still be biased, taking into consideration how subjective the arguments were. Whether they were one sided or not and so I reconciled it with the reality on the ground. The Ghana statistical service as well as the Manya Krobo District Assembly also gave me some documents on the demographic information of the villages studied, while the articles and journals on mining and chieftaincy in Ghana were also discussed.

3.8 Data Processing and Analysis

The data was analyzed qualitatively to give a deeper understanding of the situation. According to Crang and Cook (2007), data collected must be divided into parts and elements in order to produce order out of it. In that regard, the data was divided into parts in line with the research questions and objectives to make the analysis easier and orderly. The content of the data was first broadly analyzed in order to understand the various parts and after that a careful analysis of the parts was made to understand the whole. This is what Schmidt (2006) referred to as the hermeneutic circle. Through this process, meaning was created through interpretation. In doing that, I was telling the stories of the informants and not mine. Quotations were used in this regard. The first part of the analysis actually began in the field as I continuously referred and compared the data collected with the research objectives and questions. The audio recordings of the interviews, discussions and livelihood accounts were transcribed verbatim. Thematic analysis will follow in chapters five, six and seven.

3.9 Challenges and Limitations of the study

There were several challenges I faced especially during the field work. On the field, most of the informants were mainly farmers and viewed people coming from the city as knowledgeable and powerful. With my background as a master student from Europe, the participants created a mental power structure, although not different from the general class divisions in Ghana. They saw me to be more knowledgeable and powerful and so at most times, wanted me to control the pace and direction of the interviews and discussions. Despite the fact that I was able to convince

them that I have little knowledge in the study and that is why I was there to learn from them, I still believe may have affected the quality of the data though not to a big extent.

On the contrary, the key informants most of who were more powerful either through traditional means, political means tried to control and direct how things should be done. For instance the District Chief Executive of Manya Krobo district assembly who was the key informant I should have interviewed from the District Assembly failed me on several appointments before finally delegating authority to the District Planning officer to have an interview with me. This to some extent, I think affected the quality of the data I got access to from the district assembly. This is because he was much involved in the mining project than the planning officer and could have given more or quality information if he was available to be interviewed.

The representatives from the Ghana Cement Company were busy to give me appointment. Perhaps they saw the study as a threat to their work and so it was difficult to have an interview with them. What I got was a brochure from the Company. It was upon continuous visits to the mining site that one representative from the extraction firm (AJ Fanj company Ltd) who were directly involved with the limestone extraction on behalf of Ghana Cement Company granted me an unofficial interview on the spot giving me some insight into the work of Ghana Cement Company (Ghacem). It was long after I returned to Norway that I had a mobile phone interview with Dr. George Dawson-Ahmoah, Strategy and Corporate affairs director of Ghacem. Mobile phone interviews can hinder the quality of data collected. Although the nature of the work depend less on opinions from Ghacem but more on the realities and perceptions of farmers in the mining communities and the traditional council, I still believed a good interview from the officers of Ghacem will have given me a more rigorous data. The disadvantage here is that I did not have face-to-face with him and this could have an impact on the quality of data received. The same situation applied to the traditional council who granted me an interview only through the phone after I came back to Norway because the president was not available y then. This also shows the hierarchical nature of chieftaincy.

Most of my respondents were men, and perhaps I gave more voices to men than women. The reason was that, per the custom of the krobos, men are the head of household and most of the land owners who lost land to Ghacem were also men and so the situation as it were privileged more men voices than women. It is a male culture dominated by men's values, beliefs etc. I think

this also have some impacts on the data though not that significant since the gender perspectives was not a focus. Farmer's perceptions chieftaincy might not reflect that of the whole community as well as district. It might also change from time to time depending on the situation they find themselves in. Time was also a major constraint because; I was supposed to do everything within two months during the summer holidays. I could not interview a representative from Ghana Cement Company and the traditional council and was only able to do this through phone after my arrival in Norway. It was quite difficult to combine data collection with spending time with friends and family especially during the holiday's period after I have been away for one year. My attention might have been affected in one way or the other, though not enough grounds to say the data is not rigorous.

3.10 Discussion of the rigor and quality of the material

As for quantitative research also, the very nature of qualitative research leaves it open to criticisms though less open than quantitative methods. The use of small sample sizes, use of conversations as data, and analysis mainly based on reading the transcripts of the conversations held (Gatrell and Elliot 2009), leaves it open to criticisms. This usually led to qualitative research being referred to as 'touchy feely' and or 'subjective' as opposed to systematic and rigorous (Crang, 2003). This study being a qualitative research therefore might face some criticisms and with this in mind, attempt was made to make it more *credible* and *dependable* which are very salient features of every scientific research.

According to Gatrell and Elliot (2009), *credibility* is defined as the authentic representation of experience and it is tantamount to what a quantitative researcher would refer to as validity. It embodies how accurate the data collected reflects the truth or reality. In this study, the credibility of the data collected was influenced mainly by the skills of the researcher. I structured the interview guides in a way that allows details of information to be acquired from informants. There were different semi structured interview guides for different actors touching on all aspects of the research and this allowed informants to express and narrate their situation as it were. I employed a triangulation of qualitative methodology in the data collection process. The use of the interviews, focus group discussions and observations complemented each other. This

allowed for cross checks and reconciling of information. Individual interviewees sometimes were part of group discussions and their contributions gave deeper insight.

Dependability is one of the several criteria for establishing the quality of qualitative research. It denotes the minimization of idiosyncrasies in approach and in interpretation (Gatrell and Elliot 2009). It concerns how consistent research findings are. The consistency of the findings to a large extent depends on how the data was collected. All interviews in this study were conducted in the local dialect of the people (Krobo), and that made it possible for them to narrate and express themselves without any difficulty. The most interesting thing is that, I am a krobo who reads and writes the language and so I was able to transcribe correctly into English without much discrepancies in the originally spoken version of the respondents. During the interviews with the primary informants, I continuously asked the question '*is this what you mean*' just to confirm any issue I don't understand in order to be sure of what they have said and this was mainly to make the information received dependable. The interviews were conducted privately to allow respondents feel free to express their opinion in the best way they can.

Confirmability refers to the extent to which biases, motivations, interests or perspectives of the inquirer influence the interpretations (Gatrell and Elliot 2009). All researches to some extent are influenced by the position of the researcher, the sex, the age, insider versus outsider, among others. Being a Krobo by tribe which to some extent gives me the insider status might have influenced the way informants responded to me. It gave me access to very vital cultural, institutional and socio-economic information an outsider may have been denied. The fact that I was a master student in a European country who mainly resides in the city may have also influenced the way informants responded to me. As a young man dealing mainly with older men and women might also influenced the way they might have responded to me. Given the objectives of the research and also due to the fact that the outcome of a qualitative research depends on the exchanges between the researcher and the researched, and also a limited number of informants and may be limitations to confirm the findings of this research in other contexts.

However, similar researches that may be or may have been conducted in Ghana or other parts of the world with similar social and cultural factors may yield similar results. The researcher stayed true to the findings of the research in the transcription, analysis and interpretation of the data and apart from the limitations the study faced addresses earlier on, the

study could be reasonable, credible, dependable and confirmable taking into consideration the spatial and temporal dimensions.

In all, there are some biases and weaknesses in the approach, as may be expected, however, there are no strong reasons to believe they will represent crucial objections to the soundness and trustworthiness of this methodological approach to the study due to triangulation of different methods and oscillating between insider/outsider positions.

4 DESCRIPTION OF THE STUDY AREA

4.1 Profile of Ghana

Ghana is located on the coast of West Africa and shares boundaries with Burkina Faso on the North, the Gulf of Guinea to the south, Togo on the East and Ivory Coast in the West. It has ten administrative regions which are divided into 238 geographical and administrative districts, municipal and metropolitan assemblies. It has an elected president with a unicameral legislature and an independent judiciary. According to provisional results from the 2010 population and housing census, Ghana has a total population of approximately 27,000,000 people. There are more women than are men with the figures being 52% for women and 48% for men (Lower Manya Krobo District Assembly (LMKDA), 2010).

Ghana is primarily an agricultural economy; this sector accounted for about one-third of the gross domestic product (GDP) and more than 50% of the labor force. Ghana is rich in natural resources of great economic value. It is the world's second largest exporter of cocoa, the sixth largest exporter of diamonds, and a major exporter of gold and manganese. In addition, there are other industrial minerals deposits such as limestone which have in recent years being extracted in commercial quantities for industrial use. For example, formal mining and quarrying including limestone quarrying accounted for approximately 25% of GDP and about 10% of government revenues and employs about 5% of the total labor force in Ghana (Coakley, 1996). The mineral sector to a large extent is therefore a very important sector for the Ghanaian economy.

4.2 Background of Manya Krobo

The people of Manya Krobo who constitute the krobo tribe of Ghana according to Ghana Gazette Extraordinary No.105, 27th November 1959, and titled 'The Stool Lands Boundaries (Manya Krobo)' Order, 1953, L.N. 282':1583), are believed to have migrated from somewhere in eastern Nigeria. Historical accounts indicated that they arrived on the banks of river Volta sometime towards the end of the fifteenth century. They established their home on the krobo hills near present day Akuse where to this day remains the ruins of their old town built on solid rocks, as well as the remains of their ancient ritual shrines. It is now a tourist attraction site which they

visit during the Krobo Ngmayem festival, a festival that is used by the chiefs and people of Manya Krobo to thank their gods for enough food (Ngma) and ask for their blessings for the coming years and to promote chieftaincy culture. The festival has been held annually since 1944 every October-November to foster tribal unity, but it also commemorates the end of a famine that occurred hundreds of years ago).

As their population increased farming villages were established from Trom to Nuaso on the plains beneath the foothills of the Akwapim Togo range, where the land proved more fertile for farming. They went further north in pursuit for more lands to cater for the needs of the people and in the process founded more towns and villages like Assesewa, Sekesua, Bueryonye, Odugblase, Otrokper, Korso, among others. Refer to Figure 3 below.

4.2.1 Geographical Background

The Manya Krobo district is located in the eastern region of Ghana. It is one of the 21 districts in the Eastern region of Ghana. It is the main gateway from the Volta Basin to the Accra plains and the Akwapim Togo ranges and further north into the Afram plains of the Eastern region of Ghana. The region shares boundaries with the Afram Plains district to the North East, Fantekwa in the North West, Yilo Krobo to the South East, Dangbme West to the South West, North Tongu to the South East, and Asuogyaman district to the East. The district capital is Odumase Krobo (LMKDA, 2011) Refer to Figure 3 below.

According to provisional results from the 2010 population and housing census, it has a population of approximately 210, 000 people (LMKDA, 2011). The District covers an area of 1,476 km², constituting about 8.1% of the total land area within the Region (18,310 km²). The district has two major divisions. They are Lower and Upper Manya Krobo whereby the Upper has Assesewa as the capital. The population of the district has been increasing over the years with an average growth rate of about 1.2%. This is illustrated in Table 2 below. The age-sex structure is also illustrated in Table 3 below. About 58.5 % of the total population of the area is aged between 15 and 64 years. Lower Manya krobo has a population of approximately 90,000 people (LMKDA, 2011).

The housing pattern of the area is linear. Most of the houses line major roadways. Houses are built on rectangular strip of land (*huza*) along roads. The *huza* is a system of land ownership whereby people own rectangular strip of land with clear boundaries and every one settles and

farm on his or her piece of land giving settlement a linear nature along roads. The district has both first, second and third class roads. First class roads normally link urban areas whiles third class roads link up rural areas.

Table 2 Manya Krobo District population and growth rate between 1970 and 2010

Census Year	Total Population	Growth Rate
1970	113,072	-
1984	134,530	1.2%
2000	154,301	1.0
2010	210,210	1.6%

Source: Lower Manya Krobo District Assembly (LMKDA), 2011.

Table 3 Age and sex structure of Manya Krobo District 2010

Age Group	Male (%)	Female (%)	Total
0-14	18.5	19.6	38.1
15-64	29.3	29.2	58.5
65+	1.6	1.9	3.5
Total	49.3	50.7	100

Source: Lower Manya Krobo District Assembly (LMKDA), 2011.

4.2.2 Relief and Drainage

The topography of the district is relatively undulating to be located in Ghana. The highest point in the district is about 660 meters above mean sea level located at Sekesua in the upper part of the district. The south western part is the lowest area in the district about 50 meters above mean sea level. The district is drained with different rivers such as Volta, Akrum, Pawnpawn and Anyaboni. Most of these rivers, with the exception of the Volta, are seasonal which overflow their banks during the rainy season but soon dry out during the dry season. The Volta River is the most important river in the district as well as Ghana providing both households and industries with hydro electric power and also a substantial amount of foreign exchange through the sale of power to neighboring Togo, Benin and Ivory Coast. In addition, it is used as a major transport

route between the Northern part of Ghana and the South. It provides livelihood to a substantial number of people who work as fishermen.

4.2.3 Climate and Vegetation

The district lies within the semi-equatorial climate with an annual mean rainfall ranging between 900mm to 1150mm. The region has two main seasons. These are dry and wet seasons. The wet season starts from April to October while the dry season stretches from November to March. This gives two major farming seasons (main and minor) respectively. The district lies between the semi deciduous rain forest belt and coastal savanna vegetation zones in Ghana. Upper Manya krobo has more forest reserves with more rural settlements while the lower part (which is the study area) has savanna woodland with urban settlements with just a few rural settlements.

4.2.4 General Economy

About 70% of the working population is engaged in peasant agriculture which constitutes the main source of household income in the area. There are both cash crop farmers and food crop farmers with the latter constituting about 78% of total agricultural employment. Root tuber crops such as cassava, cocoyam and others such as plantain, maize, rice are cultivated. The district is also well known for the cultivation of vegetables such as onion, tomatoes, okra and garden eggs. These crops are consumed locally as well as sold to urban markets for income to buy other things they need. Fishing is prevalent at Kpong and Akateng on the Volta Lake. Livestock farming is also practiced in the district normally side by side with food crop farming however there are a substantial number of people who are into full time livestock farming. Animals reared include goats, sheep, pigs, poultry and horses. In the year 2010, the national best farmer of the Republic of Ghana was from the Krobo area and that shows how important farming is to the economy of the krobos.

Other people are into trading, masonry, bead making, dressmaking, stone cutting, and a few white color jobs like teaching, banking, and nursing among as the most dominant. The region has some of the major markets that supply food to the country and due to its strategic location of just about forty minutes drive from the capital (Accra metropolis). Assesewa and Agomanya markets provides ready market for the farm produce of the people.

4.3 The Research Towns

Bueryonye and Odugblase are both in the lower Manya krobo area and are well noted for fresh vegetable farming such as okra, tomatoes, pepper, garden eggs, water melon and cereals mainly maize. Root tubers such as cassava, yam, and potato are also cultivated. Their produce are consumed locally by themselves as well as sold at Assesewa, Agomanya, Koforidua and Accra markets for income. These two villages are often referred to by local people as the *twin villages* (due to proximity). Bueryonye is located on the Odumase-Assesewa highway while Odugblase is on located along a third class branch road from Bueryonye to Yonguase. According to provisional results of the 2010 population and housing census, Bueryonye has a population of 442 people while Odugblase has a total of 284 people. This is illustrated in Table 4 below.

Table 4 Population of Research Towns, 2010

Locality	Male	Female	Total
Bueryonye	232	210	442
Odugblase	137	147	284
Total	369	357	726

Source: Lower Manya Krobo District Assembly, 2011.

Inhabitants of these two villages have from the early 1970s have been known for the small scale quarrying of limestone by individual landowners and farmers who in addition to this venture also cultivate crops as mentioned earlier. Farmers and their households extract limestone on their portion of land (*Huza*) and so about 80% of households take part in this business in the villages. Sometimes, landless households can work for land owners in the limestone quarry and they share the income. That means that, the limestone quarrying provided a livelihood activity for both landowners and landless households. These two villages were both prosperous in the past due to fertile soils which facilitates higher crop yields and also a booming quarry business. Men, women and children in a household took part in the limestone quarrying although not done in isolation (normally done aside farming) according to them, was relatively profitable because they get “*quick money in bits*” that is they got money immediately they sale the limestone to one middle man buyer popularly known as Aboabo who buys the limestone from them. They make several sales in a month so they get money quite often though not huge sums.

According to the informants, they use this money to take care of their needs such as buying fish, kerosene for their lanterns and other things that they need but they don't produce it themselves. They also use part of this money for paying school fees of their children until they harvest their crops. To them, this was a very important part of their livelihood because it contributed a substantial amount of household income. On average, it contributes about 48% of household income of informants. This was made known to the researcher through personal communication from household interviews.

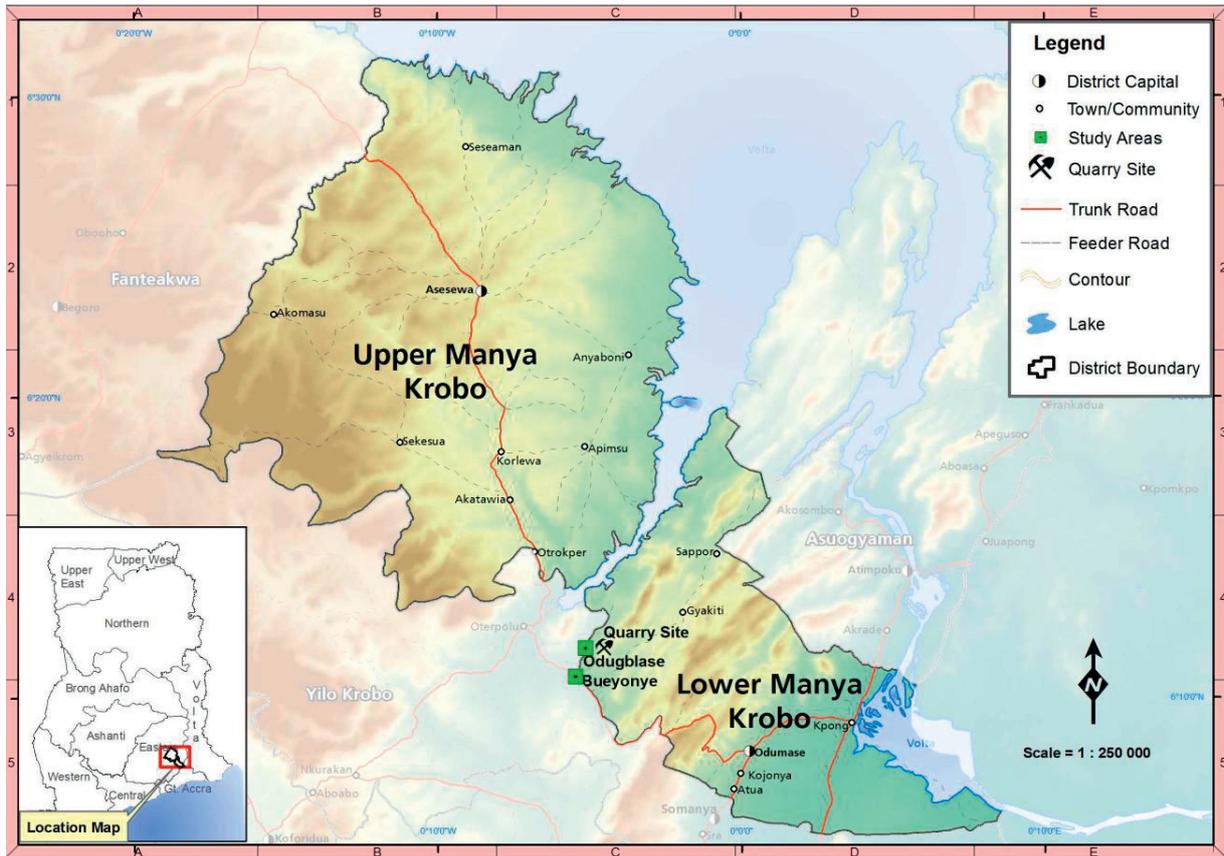
However, for the past six to seven years, their yields have been reduced, households have been rendered landless, and people have been deprived of their major livelihood asset (land) and a livelihood activity of limestone quarrying because Ghana Cement Company (Ghacem) has been granted concession to mine limestone in commercial quantities in the area. Many households have become vulnerable. Ghacem is a cement producing company which was founded by the government of Ghana in collaboration with NORCEM of Norway on 30th August, 1967. In 1993, government sold 35% of its shares to SCANCEM (formerly NORCEM) and SCANCEM as a result had 59.5% leaving government with 40% while 0.5% went to a local investor. In 1997, government sold 5% of its 40% shares to the workers and in 1999, the remaining 35% share of government was sold to SCANCEM, presently, SCANCEM owns 93.1% shares while the remaining is owned by the workers of the company and a local investor, Dr. Addison. In the year 1999, the Heidelberg Cement Group in Germany took over SCANCEM, thus making it a subsidiary (Ghacem brochure 2009).

It is the largest cement producing company in Ghana with two major plants in Tema and Takoradi with a total capacity of 2.4 million tons of cement per annum. The company has for many years relied on imported raw materials with local ones. On the 24th of August 2004, the then president of the Republic of Ghana commissioned the mining of limestone in commercial quantities by GHACEM at the Odugblase-Bueryonye area (Ghacem brochure 2009) to provide limestone for the production of cement to meet the growing demands.

Traditional and cultural believe is still high in these communities. This are small communities in which people know themselves and are almost aware of what goes on with every member of the communities. Adhering to cultural norms is cherished and all people aspire to be culturally 'accepted'. Chieftaincy is revered as a powerful institution and people here have

respect for the hierarchy, from village chief to the paramount chief. Inhabitants deal with chiefs on daily basis unlike the occasional basis in cities. Fig 3 below shows the research town.

Figure 3 Map of Manya Krobo showing research towns



5 IMPACTS OF MINING ON FARMERS ASSETS

This chapter seeks to investigate the impacts of mining on the assets of farmers and the vulnerability context within which they live or pursue their livelihoods. The importance of assets to gaining a livelihood has been stressed by the Sustainable Livelihood Framework. Currently, several studies have been conducted in Ghana and the world at large on the impact of mining on farmer's livelihoods in host communities. It has been established that while farmers are displaced off their natural assets as well as confront other environmental, social and economic problems due to mining; they also receive some form of benefits in the areas of compensation, alternative livelihood activities, education, employment as well as infrastructural development (Akabzaa & Darimani 2001; Yankson 2010, Ocran 2010; Adjei 2007) to improve their livelihoods. However, these impacts differ from place to place. In this chapter, the impacts of mining on the assets of farmers in the studied areas are discussed.

5.1 Vulnerability Context

As indicated earlier on in Chapter four, prior to the year 2006, the researched communities engaged in two main livelihood activities. These were crop farming and limestone quarrying. They have two farming seasons in a year. Other economic activities include processing of palm nuts into palm oil and petty trading. According to informants in the study areas, they use income from both activities to supplement each other to pursue viable livelihoods. They grew crops such as maize, cassava, garden eggs, okra, tomatoes, cocoyam, yam, water melon, plantain, mango, pineapple, sugar cane, groundnut and pawpaw for local consumption and also for sale. Most of these crops are cultivated as mono cropping and so they require large tracts of land for farming. Farmers therefore combine small scale quarrying and farming to gain a living.

However, informants indicated that the loss of land and the procedure of land acquisition came to them as a shock. As discussed earlier on in chapter two, though in most cases, shocks may be due to natural occurrences such as earthquakes, drought, famine and floods, a sudden confiscation of land from farmers without adequate preparation to cope can also be considered as a shock. This came with different degree of acceptance and blame. Discussions with landowners in the mining communities described the process surrounding the transfer of land rights to Ghacem as a shock. *'In fact, it came to us as a shock'. We were indeed surprised at seeing*

strangers on our lands without any agreement with us. Men, women, children were all alarmed as they immediately rushed to my palace to register their displeasure (Village chief of Odugblase, stated). Land owners and farmers who were major stakeholders did not get information from either government or the traditional council about this issue on time. Just after one meeting with the traditional council, Ghacem started operating even when they have not yet compensated the farmers.

Evidence from household interviews suggest that, this sudden and long term changes in the resource base of the informants (confiscation of land and limestone from local resource users) increase risk and uncertainty of households which lead to a decline in well being. This concurs to a view by Carney (1998). Three types of shocks were identified as a result. Physical shock, economic shock and psychological shock

5.1.1 Physical Shock

The mining of limestone has claimed land that was used for farming. All land owners interviewed claimed they have lost substantial sizes of land to Ghacem. Some land owners have however lost more land than others. The effect is that, there is more demand for farming land than what is available. Landless households who depend on hiring of land for farming are also faced with the difficulty of price increases as the invisible hands of demand and supply is at work.

Majority of interviewed head of households said their farmlands were destroyed by mining activities. According to them, land granted to Ghacem was hitherto used for farming. This they said has brought intense hardship to their households as their crop output has reduced thereby reducing the quantity of farm produce for sale. Although they admitted that they received crop compensation (a lump sum) depending on the acreage of farmlands that were destroyed (USD 300) per acre they say the amount was not only meager but they got compensated for only once and only almost a year after Ghacem started operating. According to 72 years old informant from Bueryonye, *'we used to cultivate two times a year (referring to the two farming season's i.e. wet season and dry season). We were not adequately prepared against the confiscation of our lands and limestone. This unexpected event has brought hardship to our homes''*. The above quotation could mean that, farmers were not prepared against the allocation of their lands to Ghacem and hence could not prepare adequately cope.

5.1.2 Economic Shock

As indicated earlier in chapter four, the study revealed that small scale limestone quarrying has for years been a major economic activity of the people of Odugblase and Bueryonye communities. Since the early 1970s they have been known for the small scale quarrying of limestone. Landowners, Landless households engaged in this livelihood activity in addition to the cultivation of crops (farming). Each farmer and the household extract the limestone in their portion of land (*Huza*) and so there are several households taking part in this business in the villages.

Landless households can work for land owners in the limestone quarry and they share the income equally. That means that, the limestone quarrying provided job for both landowners and landless households. These two villages were said to have been both prosperous in the past because they get income from quarrying to supplement what they get from their farms. Men, women and children in a household took part in the limestone quarrying and according to them, it was relatively profitable because they get “*quick money in bits*” that is they got money immediately they sale the limestone to one middle man buyer (Aboabo) who buys the limestone from them and they made several sales in a month so they get money quite often though not huge sums. This findings concurs to Lund et al (2008)’s work on stone quarrying in central Ghana

According to the informants, they use this money to take care of their needs such as buying fish, kerosene for their lanterns and other things that they need which they don’t produce themselves. They also use part of this money for paying school fees of their children until they harvest their crops. “*Limestone quarrying helps me a lot. If I divide all I earn in terms of income, it contributes about 48% of my household income*” (46 years old man from Bueryonye). The above quotation indicates the economic significance of the previous private limestone quarrying to farmers.

5.1.3 Psychological Shock

Some informants indicated that they were overwhelmed, frustrated and were in a state of despair. They explained that the magnitude of the shock was intense that some of them still find it difficult to deal with. Some are in a state of depression as they could not cope with the sudden change. There is also a general feeling of being deceived by the traditional council who they

thought could have helped them to benefit from mining. This has created a state of mistrust towards the traditional council, something which if not carefully dealt with can threaten the authority of chieftaincy in the future.

A 56 years old informant from Bueryonye stated *‘I am not happy at all. My loss of land coupled my inability to get a job has put me into a state of thinking. I am psychologically down (meaning worried or despair)’*. The extract above shows the psychological situation within which farmers find themselves due to mining. Another farmer 48 years from Odugblase stated *‘I have lost my wife because I can no longer provide for the household. My elder son has also dropped out of school because I can no longer pay his school fees’*. This implies that the shock of loss of land and limestone has the potential to disintegrate families.

5.1.4 Stress

Chambers and Conway (1992) describe stresses as pressures which are typically continuous and cumulative, predictable and distressing. These increase gradually to affect livelihoods of households. Living in fear and uncertainty about the future were the main forms of stress identified in the study areas. Farmers and Landlords do not have any idea whether they may have the chance in the future to take back their land from Ghacem and get back their limestone. According to informants, information reaching them is that, Ghacem is negotiating for more concessions from nearby communities of Korm and Yonguase where they have currently acquired land on rental basis for farming and share cropping.

Informants revealed that, they are living in constant fear because the future is highly uncertain for them. They are of the view that, if that should happen, then they may find it difficult to access land for farming which they believe will further worsen their plight. Some informants also claimed that, Ghacem is operating outside its concessions and it dumps and heaps stone debris on available farming land. They claim this has been happening for some time now and even though they have complained to officials of the company, they have not taken steps to stop the situation

5.1.5 Trend

Increasing cost of living, increasing cost of farming land, decline in farm yields are the main forms of trends identified. As indicated earlier on, the loss of land to Ghacem has put pressure on available land for farming and this has increased prices as well. Dust from the site settles on vegetables. Wind pollution as well as land degradation has led to a reduction in farmers' productive capacity. Cost of living is increasing due to reduction in output as well as the new capitals injected by mining to employees, most who are non local employees who use some of their wages locally. This according to informants is adversely affecting their livelihoods.

5.2 Impact on Stock of Capital

In the Livelihood framework, assets, (both material and social) are 'capitals' in different forms which combined together, is deployed to enhance households' well-being. This includes natural capital, human capital, social capital, physical capital and financial capital. Access to and use of these capitals by households has been affected by mining activities. Mining have had diverse impacts on farmers stock of capital.

In both communities, most head of households stated that mining has impacted their assets negatively. When asked whether mining and the operation of the mines in the community has helped their livelihood activity as farmers, their assets, capabilities and general stock of livelihood resources, most informants answered no to the question. They explained that mining has affected their assets negatively which intend affects their livelihoods. A few head of households interviewed however stated that mining have affected their livelihoods positively.

5.2.1 Impacts on Physical capital

In both Bueryonye and Odugblase communities, most informants indicated that mining have affected their physical assets negatively though the level of impact varied from farmer to farmer depending on individual factors. In the first place, they indicated that, their farmlands were destroyed as result of mining activities whiles they received meager financial compensation. A 28 years old man from Odugblase stated *"I lost about three acres of farmland to Ghacem. All my crops were destroyed in the process"* They also stated that the use of dynamite for blasting at the mining site makes noise as well as sends shock waves and vibrations that creates cracks in their

buildings and storage facilities and has caused damage to it. An old woman 58 years old from Bueryonye community stated “*my only water storage pot (made from clay) was destroyed due to the shock waves from the use of dynamite for blasting at the mines*”. Another middle aged woman from Odugblase stated “*the waves apart from the cracks in my building have also collapsed my room ceiling (made of clay)*”. Odugblase community was the most hit by this problem as it host the mining site. The intensity is a bit less at Bueryonye.

Another major impact area was on their road network. Informants from both communities explained that, over three hundred heavy trucks convey limestone from the site to Tema for processing on daily basis. According to them, the roads which are not asphalt but bitumen have deteriorated tremendously since the mining started. This they say affect transportation of their produce to market and has also led to higher transport charges which drain them of financial resources. A 47 years old farmer from Bueryonye stated “*our roads have been destroyed by the heavy trucks. This has increased the cost of transport as well as the travel time*”. Unlike Adjei (2007)’s work in Wassa West where mining companies have renovated and built roads, the same cannot be said about Odugblase-Bueryonye.

A few farmers however indicated that, their physical assets stock has been enhanced due to mining activities. These were households that had a member or more employed in the mines. This implies that in a mining context, access to employment can help one get access to other assets According to these head of households, although their lands were lost, they now earn income higher than before although lower than they expected and they have been able to buy farming land at nearby villages, they have the financial resources to maintain their buildings through frequent rehabilitation of cracks, and also they have been able to acquire farming equipments such as weed and water spraying machines to boost farming. A 32 years old farmer stated “*I lost my land to Ghacem, but they employed me and I now get money to buy things that I need*” This implies that, farmers access to employment could help them get other assets they need (Yankson 2010; Ocran 2010; Anyemedu 1992 cited in Akabzaa & Darimani 2001:34). The study however revealed that, in spite of the negative impacts on the physical assets of farmers in the community, Ghacem has not provided them with any alternative lands to take up farming, build roads, or provide support for them by say the provision of cement for renovating their houses contrary to the findings.

Figure 4 Pictures showing impacts on physical assets of farmers (from top left: Cracks in water storage pot; pot holes on roads and cracks in buildings)



Source: Field Work, 2011

5.2.2 Impacts on Human Capital

Generally, the study revealed that, limestone mining has impacted human capital negatively. Yankson (2010)'s work indicates that in order for farmers to acquire the skills needed to be employed in the mines, mining companies operating in the Wassa West area have sponsored local people in school to acquire the needed skills. However the study revealed that Ghacem has not put in place any educational support scheme for the children of affected farmers nor have they put in place any alternative livelihood program to equip farmers with skills six years since it has started operating in the area. *“Unlike other companies operating in other parts of Ghana, Ghacem does not give our children scholarships. They do not even train us to get jobs. They*

always say we are not qualified'' (Assembly man for Bueryonye-Odugblase area). This means farmers expected mining companies to help them educate their children to improve the human capital stock of the household.

Informants from both communities indicated that, Ghacem hasn't employed many local farmers as they expected. According to them, the mine officials always tell them they do not have the needed skills. It must be noted here that, generally throughout the country, mining has had limited capacity to offer employment to local people due to its capital intensive nature, so they normally train people either to offer direct employment or indirectly through the acquisition of skills (Akabzaa & Darimani 2001). However, informants revealed that the mine officials prefer outsiders from cities like Tema, Accra, and Odumase to the local people. They were of the view that Ghacem must employ the youth in their communities and give them the needed training so that they can work in the mines. Farmers were also worried that the traditional council could not engage Ghacem for a deal that will give some quota of employment to the local people.

Another major impact of mining on the human capital of farmers is water, air and noise pollution. According to informants this affects their health. They explained that dust and noise from the use of dynamite for blasting in the mines causes' headache, catarrh and other respiratory disease. Dust pollutes their vegetables and farmer households could no longer collect rain water because it is polluted with dust. This impacts their health negatively and at large the human capital base. Farmers are also at risk of sexually transmitted diseases due to the influx of people from different areas of the country. *''The frequency at which people visit the clinic has increased since the operation of the mines began. People from different areas have in fluxed our communities and this can lead to the spread of HIV AIDS''* (56 year old farmer from Odugblase).

Mining have however enhanced the human capital of a few households. These were households which have a member working in the mines. They are given on the job training and this has improved their skills and put them in a better position to give their children training in other jobs as well than their counterparts who do not have job in the mines. *''I used income from the mines to help my daughter learn a profession (seamstress). She now has her own shop and she supports her siblings. This has further reduced economic burden on me. It wouldn't have been possible without the mines''* The extract above shows that mining seems to affect positively those employed in the mines and trickle down to enhance the human capital base of their

households. If mining companies could do more of training and grant more scholarship to farmers and their households, it could enhance their human capital as well as enable them to acquire other assets. This could enhance their asset pentagon and hence a secured livelihood. This also shows that farmer households with the skills were in a better position to get employment than those without and this confirms Carney (1998) view that human capital can be deployed to pursue a livelihood.

5.2.3 Impacts on Financial Capital

Asked of the impacts of mining on their finances, most farmer head of households indicated that, their finances have been adversely affected. This they explained that, the loss of land to Ghacem, coupled with their inability to access royalties, as well as failure of Ghacem to provide alternative livelihood activities have affected their finances over the years *‘We no longer have access to limestone quarrying, nor our farmland, yet they do not give us other opportunities to earn income’* (27 years old farmer, Bueryonye). Their yearly output has reduced due to inadequate land as well as land degradation. As stated earlier on, limestone mining has offered very limited direct as well as indirect employment.

One middle aged informant from Odugblase stated *‘now we cannot afford three square meals a day. In the past, we have enough money to meet our needs. Income from quarrying was used for paying school fees and other recurrent expenditures. Since 2006, our yearly farm output has reduced whiles we don’t get money from any other source We are really suffering and we need help since our chiefs have also failed us’*. The extracts above means, farmers blame not only the mining company for their predicament, but also their chiefs. This will be discussed in chapter six. Farmers explained that, their situation has been worsened because they have to sell their livestock’s in order to support their children in school reducing their asset base.

Another impact on their financial capital is the high cost of living. Farmers have to live with the new income injected by mine workers and the increasing population. This has further reduced their financial stock of capital as they have to spend more than they used to. The high cost of living has been established in other mining researches (See Adjei 2007 and Akabza et al 2008). In spite of the inability of mining to improve the financial capital of the farmers, some of them revealed that the increasing populations have provided ready market for their farm produce as well as the opportunity for some of them to provide services to mine workers. For example,

some farmers revealed that, members of their households are selling food for to mine workers. This they say helps them to make some savings. A few farmers who are employed in the mines however stated that mining has improved their financial capital. In general however, a cost/benefits analysis may however show that farmers overall financial capital has reduced.

5.2.4 Impact on Natural Capital

Limestone is a non renewable natural resource. According to informants from both communities, the rate at which Ghacem is exploiting the resource means that it will be depleted and their future generations will not have the ability to meet their own needs. They also explained that, mining has led to land degradation as evident in reducing crop yields. The productive capacity of land has reduced due to mine activities. Farmers explained that unwanted water retrieved from the mine site has not been rightly disposed and this has found its way onto their farmlands flooding their lands and giving their crops a reddish brown color and hence reducing yields. These they say is affecting not only their crops but also the forest cover of surrounding lands see Figure 5 below.

Secondly according to informants, dust from the mining site has polluted the river from which they fetch water for drinking, cooking, washing and irrigation. They have also explained that, when it rains, running water carries stone debris from the mine site and deposits it in the river which gets the water polluted. Air pollution and noise pollution creates discomfort and stress. According to them, this intends reduce other stock of other capitals.

Another impact on natural capital was the high price placed on land. Land owners have taken advantage of the shortage of land and are placing high cost on land needed for farming. In spite of this negative impact, Ghacem has not provided any alternative land for them in the form of compensation. They claimed that, the provision of an alternative land could have helped them to take up farming or use it as collateral to acquire financial capitals to enhance their asset pentagon.

It must be noted that informants revealed that natural capital was their most important capital. They indicated that, they deploy natural capital to get other capitals. For instance as stated earlier on, limestone was mined privately for financial capital, which was also used to boost human capital as well as acquiring social capital. The negative impact on their natural capital resource stock therefore is a major concern to them as it affects all other capitals.

Figure 5 Pictures showing impacts on farmers crops and land (From left, reddish brown maize leafs and flooded farm)



Source: Field Work, 2011.

5.2.5 Impacts on Social Capital

Informants revealed that lack of educational opportunities from Ghacem has affected their social capital. Mining has increased youth unemployment which has led to social unrest and vices like stealing, school dropout as well as drug abuse. According to informants from both communities, this has created conflicts between farmers and their friends. *“I quarreled with my friend because he said my elder son stole his fowl. Since then, we have not been on good terms”* (46 years old woman, Bueryonye). This implies the bond between them which they could deploy in times of need has been weakened.

Secondly, according to the assembly man of the area, mining has led to the disintegration of families. *“The young married girls are going after the mine workers who have money to take care of them. This has led the breakdown of some marriages in recent times”*. Informants from both communities also corroborated this earlier point when they stated that mining has led to prostitution as young women are trading sex for money. This they say risk the community of sexually transmitted diseases. It was also revealed that, the increase in unemployment has pushed many people, mostly men to migrate to Accra and Tema to take up jobs. This they say has led to the disintegration of several marriages.

It was however revealed that farmers are bonding together in order to pull their power and resources together to change their situation. They now have the land owners association that is trying to engage chiefs on behalf of the farmers. They have also bridged with some pressure specifically Kloma Gbi and Klo Hengme, Korle Hua, which are using social network and the media to bring to fore the farmers situation for action. It was however revealed that, this is yet to make any significant impact. These are intellectual movements that have bridged up with farmers with a common goal of fighting injustice. Farmers have confidence in this heterogeneous group and are hoping for a change in the local politics and power struggle over mining benefits.

6 CHIEFTAINCY AND FARMERS ACCESS TO ASSETS (MINING INDUCED BENEFITS)

6.1 Background of Manya Krobo Traditional Council (Chieftaincy institution)

The study revealed that, chieftaincy was and still continue to be a very important system of local government in Manya-Krobo despite the emergence of democratic rule and the emergence of the district assembly system in the country. Chieftaincy has been passed down from history and has transitioned from priestly theocracy to chieftaincy. In this system of rule, the paramount chief (Konor) is seen as the symbol of authority and fountain of honor. It is the embodiment of the community in its relations with the outside world (Valsecchi 2007).

The paramount chief is ably supported by divisional (*Wetso*) and sub-divisional (*Kasi*) chiefs. These chiefs are from royal families and they have stools they occupy. They are also supported at various villages and farming communities by other chiefs known as (*Dadematseme*) whose installation is just by achievement and social standing in society. This village and community chiefs are answerable to the hierarchy. These hierarchies of chiefs together form the Traditional Council of Manya Krobo. The office of the traditional council is located at Odumase-Krobo, capital of the Manya Krobo District and Traditional area. Decision making is centralized in the capital and hardly involves village chiefs. The traditional council is the epitome of knowledge that guides behavior and revered as the most powerful institution in the area. It performs legislative, executive, judicial, economic and religious/cultural functions to effectively govern Manya Krobo. Krobo society could therefore be regarded as hierarchical (Douglas 1978).

- The traditional council is a peace keeper and an agent of the law. It settles disputes of various degrees such as debts, quarrels, theft cases, land litigations etc. It gives moral guidance to the people and checks cases of immorality and other social vices that will disintegrate the area.
- The traditional council holds land in trust for the six clans, lineages and families in the traditional area. Rules and regulations governing land use is made and executed by the council. They have control over land, and anytime government or any organization needs

land, they are consulted and appealed to release them through negotiation. Even privately owned land within the area are still indirectly under the control of the paramount chief. Whenever land within their jurisdiction will be released to resources developers such as mining, it must get the approval of the paramount chief who is seen as the custodian of the land even when such lands are privately owned but this makes the boundary line between private land ownership and communal ownership blurred.

- As a religious function, the council is the intermediary between the living and the ancestors. It pours libation to ask for ancestral blessings and pacify the gods and deities. In times of the president of Ghana's visit to the Manya Krobo area, the chiefs pour libation and ask for the permissions and blessings of the ancestors and gods before the President speaks. They are perceived to be sacred and it is difficult to challenge or question openly their authority. Although a chief be stripped off his position under extreme conditions, it was revealed that the king makers and council of elders seldom destools a chief.
- The traditional council is the custodian of the rich cultural heritage and innovators of customs and institutions. The council also organizes the annual Ngmayem festival of the area to mark the beginning of a new traditional year among other reasons. It represents its people in national issues.

6.2 Chieftaincy Institutional Factors and Farmers access to assets

The importance of access to assets in enhancing well being of the poor has been extensively established in research. Both political ecology as well as the Livelihood framework has recognized the importance of institutional factors and arrangement in constraining or enhancing access to assets. The livelihoods of rural people without access, or with limited access to natural resources is vulnerable because they may have difficulty in obtaining food, accumulating other assets, and recovering from misfortunes or shocks (Ellis & Allison 2004) In a mining context, where farmers lose their land and limestone (natural capital), their access to adequate compensation (e.g. alternative farming land, alternative livelihood activities), employment, training, social responsibility as well as royalties is crucial to enhancing their well being. (Yankson 2010; Akabzaa & Darimani 2001). The major chieftaincy institutional factors that

emerged from the study as constraining farmer's access to mining induced benefits are discussed in this chapter under decentralization, power and culture.

6.2.1 Our Chiefs: Representation, Accountability and Responsiveness

As discussed earlier on in Chapter two, chiefs are responsive if they adopt policies that are preferred by their subjects (farmers). The institution is accountable if the people (farmers) can sanction it appropriately. It is representative if it is responsive and or accountable (Ribot 2005). The study revealed that the mining laws of Ghana; in an attempt to decentralize the regulation or control of mining, has delegated authority to local authorities (mainly chiefs) in mining communities as the legitimate institution for allocating land to mining companies and negotiating for other mining related benefits after the companies have been granted mining license at the ministerial or national level.

This is because chiefs are culturally regarded as the custodians of the land and the embodiment of the community in its relations with the outside world (Odotei & Awedoba 2006; Valsecchi 2007). *“The traditional council by our laws, traditions and culture has the responsibility to lead and negotiate with resource developers on behalf of its people because all lands within the area is under its control”* (Nene Sasraku acting president of the traditional). Corroborating this point a 52 year old farmer from Odugblase stated *‘It was the traditional council that engaged Ghacem on our behalf at all times’*. Ghacem also indicated *“we deal with the chiefs on behalf of the farmers. We don't normally deal direct with the farmers because we cannot bypass their chiefs”*. We can say culture has legitimized chiefs as the representatives of their people.

The Minerals and Mining Act 2006 requires mining companies to negotiate with community leaders (most often chiefs) at the local level who are often seen as representatives of their people and custodians of the land for what it terms as *fair, prompt and acceptable* compensation, employment agreements and corporate social responsibilities. This may be against the background that the chiefs will better involve their people in deciding what form of compensation they need and so decentralizing mediation and negotiation authority to the chiefs will enhance participation, representation and responsiveness which are important if mining is to benefit the local people (Ribot, 2005; Ribot 2002a). This is in the spirit that local people can best tell the kind of compensation they want. Chieftaincy is also the major institution through which a

percentage of royalties paid by mining companies are channeled back for the development of host communities. Chiefs may redistribute it through the provision of public goods as well as assisting adversely affected farmers.

In a mining context where farmers lose land and limestone, these benefits could be regarded as key assets (capitals) and farmer's access to these assets could be very important for pursuing secured livelihoods, without which their livelihoods may be vulnerable *"It is important for us to get enough compensation, employment, alternative jobs and infrastructural development on which we can depend for a living else it will be difficult for us to survive"* (37 years old land owner from Bueryonye) This implies that farmers view mining related benefits as key assets that they can deploy for a living.

However, the study revealed that, the choice of chiefs as representatives of the farmers have undermined the very purpose of decentralization due to the relationship between chiefs and the farmers. This according to Ribot (2005) is because farmers have been governed as subjects rather than empowered as citizens. A 48 years old man from Odugblase stated *"when the traditional council speaks, it's final. We cannot do much to influence their decisions because they must be respected at all times no matter the situation"*.

Discussions with farmers and key informants revealed that the principles of responsiveness and accountability as tenets of decentralizing authority in the negotiating for mining related benefits to the traditional council are only in theory but not in practice. The traditional council has not been responsive to the aspirations and needs of the farmers. *"Our chief's don't really care about us. It is either they have been too lenient in dealing with Ghacem or they may have a different agenda other than ours* (41 years old land owner from Odugblase).

Power relations between chiefs and farmers made it difficult for farmers to sanction the traditional council for accountability. *"The chiefs are the judges, so when we are dealing with them, who do we sanction them to? We can't afford to hire a lawyer and even if we can do that, our culture frowns on it when it have to do with chiefs"* (26 years old farmer, Bueryonye). This implies that, while chiefs may not be responsive to the needs of farmers, they may not want to take the chiefs to court to seek redress. The traditional council together with Ghacem determined 'what was *'fair,' 'adequate,' and 'acceptable'* compensation for the farmers the study revealed. Ghacem and the traditional council therefore agreed for an amount of 750 Ghana Cedis (about USD 300) per acreage of crops destroyed. A 33 years old land owner from Bueryonye stated,

“although we wanted not only a one time financial compensation, but also provision of an alternative land for farming, resettlement and skills training, a year to year compensation to take care of seasonal farming proceeds we were not involved in the negotiations and although we expressed our dissatisfaction about the negotiated amount, we couldn’t push our demands through”. Another 58 years old land owner from Bueryonye stated *“we expected that we would have been given the chance by our chiefs to decide what kind of compensation we need. Even if we don’t get exactly what we wanted, we would have got something better than what we received”*. This implies that, although the farmers would have preferred to take part in the negotiations, they were not involved. It also means that they believe they could have received a better compensation if they were involved or allowed to negotiate directly with Ghacem.

Chief’s accountability to their people in resource management and governance has been discussed in literature across Africa. Whiles Spierenburg (1995) argued that some traditional authorities are accountable; many other researchers claim they are not (Sakyi 2003; Kassibo 2002a; Valsecchi 2007). It has been argued that most chiefs inherit their positions and this does not make them directly accountable to their subjects. According to Mamdani (1996), chiefs at times subject the local people to arbitrary use of power without representation, rights or ability to question authority. Though informants did not say the chiefs are autocratic and rule them with discretionary powers, they argue that their power makes it difficult for them (subjects) to take them on, if they feel they are been treated unfairly because their culture doesn’t accept it.

According to Abotchie et al (2006), over 80% people in Ghana perceive themselves as subjects to chiefs. This form of relationship between subjects and their chiefs, it was revealed does not enhance participation, responsiveness as well as accountability of chiefs especially in the case where they act as representatives of farmers’ in determining and accessing mining induced benefits. This confirms Yaro (2010) findings that local politics and power constraints participation and fairness in the distribution of mining benefits. According to Ayee et al. (2011:22), in spite of the increase in awareness of people about their rights, factors like poverty, illiteracy as well as cultural values and norms (submitting to authority) limit local people’s voice and that the poor are not used to requesting information or questioning authority. Sakyi (2003) specifically mentioned Manya Krobo traditional council as not accountable though it didn’t say why but findings from this work suggest this may be due to what (Mamadouh 1999) referred to as chieftaincy *‘cultural bias’*.

According to Ribot (2002a), for resource extraction to benefit local people, then there must be mechanisms to demand for accountability from the institutions that regulate it. Farmers indicated that, while the traditional council has not been able to deliver according to their aspirations, they as farmers haven't been able to make threats publicly or take them to court. They rather resort to foot-dragging and gossiping what Rigg (2007) termed as '*weapons of the weak*'. Although they have made some demands in relation to what they expect, their demands haven't been met neither do they have mechanisms to sanction the chiefs. A 38 year old woman from Bueryonye stated '*we were never satisfied with the form and amount of compensation that was paid. We complained, but nothing was done about it, and because it has to do with our chiefs, we cannot take them to court*'.'

The extracts above indicate that, the very nature of chieftaincy, whereby the chiefs belong to a higher social class than the farmers, who are mainly uneducated and uncoordinated defeats the purpose of decentralizing mining negotiations as farmers did not get the chance to participate in decision making and the chiefs are neither responsive nor directly accountable to them.

6.2.2 Power: Chiefs rationalization versus farmer's rationality

The traditional council is expected to represent the interest of the farmers and take rational decisions or policies in dealing with Ghacem that will lead to the improvement of the lives of the farmers in the two affected mining communities. Rational decisions are seen as those decisions or policies made by the traditional council that are signaled as the best or rational by farmers. However, the study revealed that the council has used its power in determining rationality without necessarily considering farmer's views. According to Flyvbjerg (1998), Institutions which are supposed to represent the interest of the people may be protecting their own interest due to power. The essence of decentralizing mining governance has been defeated and power has dominated the decision making process.

Informant from both communities revealed that, the traditional council at all times made decisions based on what it feels was the right way things should be done. The assembly man for the area stated '*the traditional council negotiated for compensations on behalf of the farmers without first asking us what kind or form of compensations we want. They neither consulted other experienced traditional councils from Tarkwa or Wassa with the experience of dealing*

with mining companies nor did they hire the expertise of mining experts and lawyers to help them make the best of decisions in our interest’. This view can be related to Flyvbjerg (1998) concept or proposition that power defines reality whereby institutions with power concerns themselves with defining reality, say how negotiations for compensation are made rather than with discovering what reality is (how it should be made from other experienced traditional councils or mining experts) and therefore power defines what counts as rationality and knowledge. A 38 years old farmer from Bueryonye stated ‘*we are made to believe that the traditional council is an epitome of knowledge and they know how to do things. Even when we feel it should have done another way, they use their power to justify their position*’. Another farmer, 57 from Odugblase stated ‘*if we were allowed to deal directly with Ghacem, we would have fought for our own interest. It is our land that is been given out, and we know how this will affect us, so we would have insisted on nothing less than what will be fine for us, But this was not the case because of our chiefs*’. This implies that farmer has their own view of rationality, but because of power, chief’s reality prevailed over theirs.

Evidence from the research suggests that ‘*Rationality is context- dependent, the context of rationality is power, and power blurs the dividing lines between rationality and rationalization*’ (Flyvbjerg 1998:320). To examine this, farmers revealed that, the traditional councils of Manya Krobo and Yilo Krobo are engaged in a land dispute litigation which has denied them access to royalties to be redistributed for development of the affected communities under the stool. According to the International Monetary Fund (2004a§) cited in Coakley (2003:17.1), ‘*under Article 22 of the Minerals and Mining Law, mining companies are required to pay no less than 3% and, depending upon their profitability rate, up to 12% of their gross revenues as royalties.*’ (Coakley 2003:17.1).

Whiles this amount is meager it channeled through the chiefs to redistribute to affected people under their jurisdiction. It must however be noted here that the lands that were allocated were not stool lands but royalties was to be channeled through the traditional council before it will redistribute to the farmers after they receive it from the ministries because they are the legitimate institution for accessing it. The study however revealed that power has blurred the lines between farmer’s rationality and chief’s rationalization as decisions made by the traditional council has served as a barrier to farmers’ access to royalties. The following headlines aptly describe the conflict. ‘*There appears to be a protracted land dispute between the natives of*

Manya and Yilo Krobo Traditional Councils; thereby obstructing development purposes and intents of the Yilo Krobo and Lower Manya Krobo Districts''.(ghanadistricts.gov.gh). In the state dailies, it was reported *“There seems to be a misunderstanding between the chiefs of Manya and Yilo Krobo over the rightful owners of the land being mined for limestone at Odugblase for the production of cement by Ghacem Cement Works in the Krobo area and this has prevented their access to royalties amounting millions of Ghana Cedis which lie idle at the ministries”* (Daily Graphic 28.10.2006 pg 12) as well as *“Row over Limestone Concession, Royalties.... Krobo Chiefs Reject Committees Report”* (Akwetey 2008).

Evidence from the field suggest that, whiles Odugblase, administratively or according to the district assembly demarcation lies within the Manya Krobo district, the community has at one time or the other been controlled by both of the traditional councils. Traditional authority extends beyond the current district assembly boundary demarcation. As a result of this, both outfits claimed ownership of the limestone concession. This heightened tension within the entire krobo state. The then vice president of the Republic of Ghana had to step in to forestall peace within the area.

In an attempt to help bring peace and allow them access to royalties, the then vice president, Alhaji Alihu Mahama in 2006 instructed the Eastern Regional Coordinating Council (RCC) to establish a committee to go into the issue to establish the rightful owners of the land (LMKDA, 2006). The white paper issued by the committee which was supposed to bring peace and stability to the area was not accepted by the two traditional councils. In this white paper, it was proposed that payment of royalties should be based on the number of land owners from each traditional area. It was also established that Manya Krobo have more land owners than Yilo Krobo and so royalties that accrue from mining should be shared as follows. Manya Krobo should receive 68% whiles Yilo krobo should receive 32%. From the focus group interviews, land owners stated that, in their opinion, this was a rational decision to allow them access royalties but for the chiefs, this was not. Perhaps, they have a different interest to protect.

The two traditional councils did not accept this recommendation brokered by the RCC. Whiles the Yilo gate believe that they deserve more than 32% of royalties, the Manya gate believed that they deserve all the benefits since Odugblase is fully under its control and will not want to share royalties with the Yilo gate. To them, it was not only about mining royalties but it was mainly about protecting what their fore fathers left for them. According to the traditional

council, the institution is mandated to protect what their ancestors left for them (referring to land). *‘These lands were left for us by our ancestors through their toil and blood and we must fight at all times to keep it intact. It is our moral obligation as chiefs to defend our boundaries at any time at any cost’*. According to Teye (2005:67), Traditional believe is persistent in the Manya Krobo area because the ancestors are believed to be present at all times judging the acts of the living. That could mean that the chiefs may rationalize fighting to protect their boundaries at the expense of the livelihoods of farmers who are less powerful. But this may confirm Flyvbjerg (1998:320) idea that *‘rationality is context dependent and the context is power. Power has penetrated rationality and it’s difficult for the traditional council to make decisions with rationality in which power is absent’* This may as well confirm Gyapong (2006) argument that the multiple functions of judiciary, legislative as well as judicial and religious functions makes chieftaincy too powerful and violates the democratic process of separation of powers.

The decision taken by the traditional council as ‘rational’ with regard to how to tackle the conflict which has constrained farmers’ access to royalties is a function of power with the intention to protect its own interest. Thus consolidating its power and influence by protecting its boundaries but this has blurred the lines between farmer’s rationality and chief’s rationalization. In fact, the conflict was not really about the owners of the land because this are privately owned lands with identifiable landowners. It was rather about which traditional council has control over the area. All attempts by government both past and present to appeal to the councils to give peace a chance in order to access royalties for the development of mining communities have proved futile, a key informant from Bueryonye community revealed. The two traditional councils want total ownership and do not want to share the benefits. This presents a different picture of the traditional councils.

Whiles the real owners of the land (landowners) are interested in resolving the conflict to get access to royalties to ameliorate their suffering; due to negative impacts of mining, the traditional councils see it rational to fight for their boundaries in order not to disappoint their ancestors. A 62 years old landowner from Odugblase stated *‘the lands which have been allocated to Ghacem are our privately owned lands, and all we need is royalties to help develop our town. If the chiefs are for our interest, why are they failing to settle the score so that we can access royalties? They are not for us. They are for themselves’*. Another informant, 28 from Odugblase opined that *‘our leaders (traditional council) are selfish. They are failing to adopt*

modern ways of settling disputes and managing resources. Now, we are the people who are suffering because of their (traditional council) actions and inactions''.

Evidence from discussions in both communities suggest that, seven years since Ghacem began mining limestone in the region, this protracted land dispute between the two traditional councils has made it unfeasible for either of them to access payments of royalties by the Ghana cement company. According to the district coordinating director of Manya Krobo district assembly, information reaching his outfit is that more than 3 trillion Ghana Cedis approximately USD 1,766,150,000 is available at the ministry of lands and Natural resources but cannot be accessed due to the boundary conflict. He indicated that this is frustrating government officials and the district assembly. He quoted, the deputy Eastern regional minister, Mr. Baba Jamal to have said that *‘‘It was becoming increasingly disturbing that the two traditional areas could not settle a common score despite interventions from various quarters including the central government and the Yilo and Lower Manya Krobo District Assemblies and this is affecting the lives of ordinary people in this areas. They must know that it is the ordinary farmers and landowners in these communities who are affected due to their actions’’*. An opinion leader from Bueryonye also stated *‘‘we live in a country where government administers through a district assembly system with boundaries. Odugblase is in Manya Krobo and even though some of us who own land here are from Yilo, I don’t see the reason why our Yilo chiefs should come in at all. Well I may be wrong, but tell me if it is logical for our chiefs to keep dragging this issue even with the intervention of government officials to bring peace. Our chiefs have failed us. They are the people who are making life difficult for us. Now we cannot enjoy the benefits of mining after we have been deprived of our land and limestone’’*.

From the extracts above, one could say that, the context of rationality is power as the traditional council rationalized their decision of pursuing the land litigation instead of accepting the RCC recommendation which would have allowed them access to royalties. After all, the land is not directly theirs, they are just custodians and the impact of loss of land does not hit them directly. The council’s quest is to consolidate its grips over communities in order to consolidate its power and this has blurred the lines between farmer’s rationality and the traditional council’s rationalization. Although the farmers have their own view of what is rational, they do not have the power to rationalize it.

Corporate social responsibilities can be categorized as a key asset to farmers in mining communities. According to Atuguba & Dowuna-Hammond (2006:58), the Ghana Chamber of Mines expects mining companies to be subject to both national and district laws. They must respect and uphold human rights, as well as respect their cultures, customs and values. They are expected to consult host communities on their aspirations and values towards development. With the traditional council (chiefs) as the representative of the farmers, they are expected to engage mining companies for corporate social responsibility deals that will give farmers livelihood opportunities. Yankson (2010)'s work on gold mining and corporate social responsibility in the Wassa West mining region of Ghana, argued that unemployment and poverty has deepened, partly due to loss of farmland to surface mining but largely due to limited employment opportunities for wage employment in the industry and unsustainable corporate responsibility programs but corporate social responsibilities by companies has helped provide self employment for local people in for e.g. soap making, cloth making, which has improved the assets and livelihoods of farmers. Adjei (2007)'s work in Wassa mining region also indicates that though there was both negative and positive impacts of mining, farmers access to assets has improved due to the social responsibility programs embarked upon by the mining company. It was not however clear in their work whether this was due to engagements between the chiefs and the company or a voluntary decision by the mining companies. (Yaro 2010)'s work however indicated that engagement of chiefs with mining companies could be important in this regard.

The study however has revealed that, the traditional council which is the main negotiator and representative of the farmers hasn't been able to strike any corporate responsibility deal with Ghacem for the local farmers. According to Nene Sasraku of the traditional council, his outfit has consistently met with Ghacem to discuss the impact dimensions of their activities on the host communities. According to him, Ghacem did not fully cooperate with them. He indicated that, the traditional council has been trying to come out with a memorandum of understanding with Ghacem concerning corporate social responsibility. A propose amount of USD 500,000 as a seed sum for corporate social responsibility to help the affected farmers embark on alternative livelihood activities to enable them earn secured lives was rejected by Ghacem. Ghacem was willing to commit GH¢140,000 (USD 80,473) an amount the traditional council described as too small due to the fact that Ghacem have operated in the area for a long time. Due to this, six years down the lane, there is no corporate responsibility deal for the mining communities in place but

according to the farmers, the traditional council's failure to high the services of mining expects or consult other traditional councils with experience to enhance its bargaining power coupled with its failure to involve them in the decision making process is the major reason why they haven't been able to strike a deal. Farmers are of the view that the traditional council should have agreed to the amount proposed by Ghacem since they are doing this voluntarily.

The traditional council insists the money is too small and they cannot force Ghacem to employ the local people because the farmers do not have the requisite skills, but the farmers think the traditional council could have strike a deal that will have made Ghacem train them in order to employ them. Surprisingly, it was revealed that, the traditional council has been receiving support from Ghacem, especially during the local Ngmayem festival in the form of cement and cash to support them, something the farmers claim indicates the chiefs are only interested in what they will gain from Ghacem. *“Ghacem gives cement and money to the traditional council every year. It surprises us that the chiefs couldn't strike any deal with Ghacem for us, but have been receiving money and cement for themselves. It only tells us whose interest they represent”* (Key informant, Odugblase).

In all, we can say that power defined rationality in all this policy processes. The exercise of power by the traditional council in decision making has to a large extent constrained farmers access to assets.

6.2.3 The Cultural Context (Chieftaincy culture of obedience)

The livelihood framework acknowledges culture as a major institutional process or factor that influences or transforms how organizations and individuals interact and may be formal as well as informal (Rakodi 2002; Carney 1998). According to Williams (1976), cultures must be analyzed within their contexts and conceptualized based on how people relate with governance institutions. Like the classifications of cultural environments by Douglas (1978), the study revealed that, krobo culture is hierarchical with cultural norms that guide relations between chiefs and their subjects. Krobo culture cherishes and upholds to a culture of 'obedience to chiefs'. This however gives more power to the traditional council .Power relations between chiefs and the farmers make chiefs even more knowledgeable and powerful.

The study revealed that the chieftaincy culture of obedience shapes the behavioral patterns of farmers towards their chiefs. The chieftaincy culture of obedience is an institutional

factor that has given chiefs more power to define what is rational. Most informants in the two communities stated that societal norms and rules hindered their access to capital. They claimed that, the world view of subject being obedient to their chiefs (authority) have made it difficult to question the decisions of the traditional council or negotiate directly with mining company. *“Culturally, our chiefs remain our leaders, whether we like it or not. It has been the norm before we were born and we are always expected to show respect and obedience to them but this is affecting us because some of the decisions they take on our behalf are not in our interest”* (48 years old informant from Bueryonye). Similarly, the district planning officer stated *“even in the current district assembly system, the chiefs are seen as the representatives of their people. I think the district assembly could have dealt better with Ghacem, but the chiefs will not allow us. Now Ghacem has adopted a divide and rule tactics and they are capitalizing on the lack of expert opinion from the chiefs to their advantage”*. One could say that, a culture that allows its people the free will to oppose its chiefs, question them when they feel it is not pursuing the public agenda without been regarded as disrespectful is likely to reduce the power of chiefs for taking discretionary decisions.

This may confirm Douglas (1978) as well as Mamadouh (1999) cultural theory where they asserted that hierarchical cultures perceive members who don't follow the norms as deviants. In addition, Farmers still perceive the chiefs to possess' spiritual and ritual powers and wouldn't like to be disobedient in order not to be punished. Such a view of chiefs by their subjects only gives it more power and this according to Flyvbjerg (1998) can spoil the use of reason. It's a taboo for subjects to insult their chiefs or say something that can be interpreted as insult to the chiefs, challenging their intelligence or their abilities especially the paramount chief (Wilson, 1987).

Farmers were willing to demand for their rights but their cultural norms simply did not permit them as they wouldn't like to be seen as deviants or outcasts, 'battling' and or being disrespectful to their chiefs. This position has however been voiced vehemently by farmers in their old age category (refer to Table 1) than those in their middle and relatively young age groups. This will be returned to shortly under coping strategies in chapter seven.

In conclusion, one could say that, chieftaincy institutional factors of power and culture interact to constrain farmer's access to assets in a mining context (mining induced benefits) because it hinders farmers' representation as well as chiefs' accountability and responsiveness.

For mining to benefit the local people, these issues must be addressed. This concurs to earlier researches see (Hilson et al. 2007; Hilson & Potter 2005; Ayee et al. 2011; Yaro 2010) who primarily argue that, the poor impacts of mining in Ghana is due to institutional problems which does not favor the local people. Though not much emphasis has been placed on the role of chieftaincy, this work tried to establish its very important role at the local level so as to influence mining policy.

6.3 Conflicting local institutions (Role of the Local district assembly)

The district assembly is the formal structure of local governance in Ghana. It is headed by a chief executive who is appointed by the president and confirmed by the assembly members within the district. According to Gyapong (2006), the institutional arrangements at the local level makes the district assembly runs parallel to the chieftaincy institution and this often leads to conflicts. This conflicting relationship most often disadvantages the ordinary people.

The study revealed that, under the current local government system in Ghana, the district chief executive must collaborate with the traditional council within the area of jurisdiction to spearhead development activities. They are formally responsible to initiate and implement governmental programs and projects at the local level. In the case of mining, the district assembly must make sure that mining companies adhere to the mining laws at the local level. They are also expected to champion the aspirations of the local people. Together with the traditional council of the area, they must collaborate to make sure mining enhances the livelihoods of the people.

According to the Planning officer of Manya Krobo district, “*after Ghacem were granted mining rights at the ministerial level, we were supposed to collaborate with the traditional council to negotiate with Ghacem concerning compensation, and corporate social responsibility before allocating the concession to them*”. However he indicated that, “*the traditional council did not allow us (referring to the district assembly) to take part in any of the negotiations with Ghacem for reasons which are best known to them (Referring to the traditional council)*”. According to him, the chieftaincy institution because of the power they possess and their attachment to the people, the district assembly did not want to engage them in any score and so they allowed them to take charge. Commenting on the performance of the traditional council so

far, the district assembly is of the view that the traditional council lacked the bargaining power and so they couldn't compel Ghacem (which is a multinational company) with the main motive of maximizing profit and hence the negative impact on the land owners and host communities. This further question the administrative capacity of the chiefs as established earlier on.

It was however revealed that limestone mining is generating a lot of internally generated funds to the district assembly. Vehicles that convey limestone from the site to Tema pay GHC 10.00 (USD 7.00) per trip and this has so far earned the district about GHC 3.7 million (about USD2.3 million). However, it was revealed that, the district assembly uses this money at its own discretion. In spite of this amount that accrues to the district assembly, none goes directly to benefit affected farmers in the mining communities. According to the district planning officer, the money is not meant for the two mining communities alone since it was an internally generated fund paid for the trucks using the roads and not as money paid to the communities. He wasn't able to give me details of what that money is used for. This could imply that while mining is not benefiting farmers directly; it is generating benefits to the district assembly. The onus therefore lies on the district assembly to redistribute these revenues based on natural justice. The farmers must be the first priority, but so, no percentage has been directly allocated for the affected communities.

In conclusion, we could say that, institutions that are supposed to manage and access mining related resources for farmers to a large extent determine who gets what, when and how (Yaro, 2010). It may therefore be important to look into how rights and access to mining induced benefits are defined, negotiated for and struggled over (Bryant, 1998).

7 COPING STRATEGIES

Coping strategies as used here refer to strategies that farmer households in the two communities embrace in the response to the shock of losing 104.8 Km² of farming land and limestone whiles not getting access to mining benefits like they expected. As discussed earlier on in Chapters five and six, limestone mining by Ghacem over the past 6 years has diverse impacts on the livelihoods of farmers though a cost benefit analysis may show a negative figure.

Despite the revelation of most farmer households that mining has affected them negatively in Chapters five and six; they are quick to say that *'they will not sit idle to go hungry'* (meaning they will use their ingenuity to make a living). They are making conscious efforts to make a living out of their situation although their outcomes have been different. This concurs to the view that poor people as capable agents (See Rigg 2007; Carney 1998). However, the strategies and coping mechanisms adopted vary. While some households have secured livelihoods, others have become vulnerable. This is similar to the findings of earlier researches that households do not experience a shock or risk in the same or equal measure (Dilley & Boudreau 2001). The degree of the impact depends on several individual as well as institutional factors.

Generally, households employed natural resource based activities including (agricultural intensification, fetching firewood, burning charcoal), livelihood diversification activities (where some farmer households have now veered into trading (buying and selling foodstuffs, livestock, and kerosene) and migration. There were some households that pursued a combination of the above strategies to pursue secured lives and cope with the adversaries of mining. That implies that the strategies have some common characteristics (overlap) and are not always pure. The categorizations are therefore for analytical purpose.

In relation to chieftaincy constraints and processes, there were farmers who were of the view that they can do little to change the current situation. They were farmers who think tradition cannot be changed. These institutions and processes have been passed on to the current generation and nothing can be done to change the situation. According to these farmers, their culture teaches obedience to chiefs and elderly people and criticizing their chiefs will imply disobedience which is not culturally accepted. They may be referred to as loyal to the institution. They were mostly farmers belonging to the old age category of informants.

The second category is 'Voice'. They are more or less adjusting to their situation and they want changes in the current system. This involves informants who are continuously trying to work and rework their situation. They are the informants who are diversifying and embarking on other livelihood activities as they hope to change the situation. They occasionally criticize the structures and processes as the cause of their problems whiles they think they can do something to change it with time. They agitate for more transparency in the operations of the chieftaincy institution and the involvement of farmers in decisions that affect their lives. They believe in the supremacy of their chiefs and they believe that their chiefs are the custodians of the land but they expect them to be responsible to the people. It involves informants in their young and middle aged group. They pursue a broad range of natural and non natural resourced based activities and at times social networking to cope. This is discussed in detail below under social capital as a coping strategy.

The third category is the 'Exit'. They are the households who feel that they can no longer stay in the communities and so they migrate temporarily to other parts of the country. They share a similar view with the 'Voice' and whiles they are away; they contribute towards reworking the local situation. It involves informants in their young and middle aged group and they share similar characteristics with the 'Voice'.

7.1.1 Natural Resource Based activities as a coping strategy

This category was mostly made up of farmer heads of households that fall within the old age category refer to (Table 1) and a few people in their middle and relatively young ages. Out of a total of 34 primary informants, 12 out of 15 informants in their old age indicated that they have acquired new land for farming as a coping strategy. They explained that, they lost land to Ghacem but they have been able to acquire alternative land on which they grow crops. It should be noted that, the old age category possessed more land than the other categories and have network with other landowners in other communities. Alternative piece of land for farming was acquired through hiring, outright purchase or share farming and they deploy it (for farming) as a coping strategy. They have acquired this from nearby villages of Oborpah, Korm and Yonguase. Under this strategy, some farmers have resorted to intensive cropping on these newly acquired lands due to shortage of land. This they explained as the process of cultivating crops on the same piece of land whiles enhancing its productive capacity through the application of manure,

fertilizer, growing of cover crops and crop rotation. The livelihood outcomes of these farmers however were varied.

Households that had the financial capital or livestock for an outright purchase of alternative land for farming got more yield and high incomes. Households that acquired land through hiring and share cropping due to inability to purchase land outright however complain of lesser output and income. They explained that higher cost of hiring land, partly as a result of mining accounted for less income after harvesting. Share cropping is whereby a farmer cultivates a piece of land belonging to another farmer and they share the output equally after harvesting. Farmers who pursue this strategy claimed that, they do not get enough output to consume and hence they have no surplus to sell to get income to meet other needs. This they explained has made it difficult for them to pay school fees, buy kerosene, fish, and other household needs.

A few of farmers stated that, in addition to farming, they collect firewood for sale, and burn charcoal for the market. This they explained provided income which is not adequate in itself to take care of their needs but used to supplement income from the farm. It must however be stated here that their activities are not sustainable because gradually, trees are being fetched for firewood and charcoal and if this is continued without planting new ones, it could lead to degradation. The farmers indicated that they are aware of this, but they have no option in their situation. They have however indicated their commitment to avoid this situation by making sure that they can use income accumulated to go into new ventures such as trading in the nearest future to avoid degradation.

7.1.2 Non Natural resource Based Activities as a coping strategy

Farmers in the relatively young and middle aged groups (refer to Table 1) dominated this strategy of coping. It was also revealed that households that were previously landless also dominate this group. They have adopted non natural resource based activities or nonfarm activities as a coping strategy, but do not completely do away with their farms.

Whiles some have gone into petty trading, others take the advantage of land shortage to offer their services as laborers in the mines (though restricted due to skills requirement), on farms (as laborers for other farmers), processing of farm produce.

Livelihood diversification was identified as the most vibrant and mainly pursued coping strategy in the study. This concurs to (Bryceson 2002; Rigg 2006) who argued that Lives and livelihoods in the rural south are becoming increasingly divorced from farming and, therefore, from the land. They argued that peasant producers have moved away from producing traditional commercial and export crops and are pursuing nonagricultural income diversification as a way to get their cash needs (Bryceson 2002). They argued for policies to support the new trend.

In both communities, even informants who are still pursuing farming on alternative lands or fetching firewood and burning charcoal as a coping strategy have also indicated their desire to pursue trading or diversify their livelihoods in the near future when they get the financial capital, human capital (skills) or social capital to help them do that. This also means that livelihood diversification cannot be pursued by all but only those who have the capital to pursue it although they claim it is profitable.

Trading has become an important livelihood activity for households in the studied communities. Households with the financial resources (either from savings, through the sale of livestock, or support from a relative or social network) buy farm produce from surrounding communities and villages at relatively lower prices and send them to bigger urban markets such as Asesewa, Koforidua, Agomanya and Agbogbloshie market in Accra where they sale them at relatively higher prices. They then buy other products such as kerosene, cloths, and fish and farm inputs such as cutlasses, hoes, and fertilizers which are not readily available in the studied communities and surrounding villages to sell for them at relatively higher prices (Taking into consideration cost of transport and time).

Some households with the requisite skills of processing palm nut into oil and cassava (a root tuber) into *gari* (*local* name for cassava that has been milled, de-starched and grilled on fire) which is widely consumed in Ghana mostly by students. They sell these products directly to local consumers and or sell it to middle men who subsequently sell it at urban markets. As adversely affected farmers struggle for a viable livelihood in the wake of a shock (lost of land and limestone) to Ghacem, they pursue nonfarm activities as a coping strategy. Although entry to this activity is quite difficult since one needs cash or skills, all households (including those who have acquired alternative land and continue to farm as a coping strategy and those who have diversified or resort to migration admit that it is a more profitable venture.

However, households that have diversified or pursuing diversification as a coping strategy have not completely veered away from farming as they hire farm labor to work for them on their lands. Those who have migrated also remit back home to their relatives to hire labor to farm for them. This validates Yaro (2006)'s work in Northern Ghana in which he argued that, although people are moving away from farm activities, they still maintain their farms but under the management of laborers. The rural economy has become more complex and households are deploying assets they possess in different ways to pursue secured lives.

Livelihood diversification is however not a new phenomenon, but an age-old practice reflecting farmers' ingenuity faced with adversity and opportunities (Yaro 2006). It was revealed during the household interviews that landless households in addition to working for land owners in the hitherto booming private manpower limestone quarrying, have long resorted to trade and have been able to accumulate wealth over the years. In the wake of the shock, it became an opportunity because they were already grounded in the enterprise. Adversely affected households with the needed capital or social support to diversify have also chosen this as a coping strategy.

7.1.3 Social Capital as a coping strategy

As discussed earlier on in chapter two, Social capital which involves the social resource stocks available to farmers, can be drawn upon in pursuit of livelihoods (Lund et al. 2008; Ellis 2000; Ellis 1998). In this study, it was revealed that social capital is a major coping strategy adopted by farmers to cope against the shock of losing their lands and limestone and coping with inability to access mining benefits. Although this coping strategy has been adopted by some households, it has been revealed that it is not a reliable strategy as friends, relatives and farmer associations can fail farmers at anytime. This validates Booth et al (1998) assertion that, the size and accessibility of social capital to households varies across time and space. In spite of that, it has been deployed by some households to cope.

Although informants from both communities revealed that their networks are weak since the rich normally prefer to associate with the rich, they stated that in spite of all this, they draw on friends for loans, gifts, foodstuffs, and ideas, motivation and consolation to live. This could be related to the concept of bonding social capital by Putnam (2000). A 52 year old farmer from Odugblase stated *“we have the Landlords association that has tried to coerce affected land owners and farmers to present a common front to fight the injustice being meted out to us by our*

chiefs and Ghacem. Although we haven't been able to make any impact yet, we hope something will come up soon''. This means that some of the farmers are teaming up to form a more powerful group to lobby the chiefs. Although they haven't been able to make any impact yet, they are hopeful. The Landlords association also gives support to its members to get alternative lands either temporarily or permanently for farming. This has helped some of us to cope. Another farmer, 38 years old man from Bueryonye stated *“my elder sister in Accra has been of great help to us (referring to his household) since this calamity. My elder daughter has moved to live with her in Accra. She has supported me with some capital (GHC 500) equivalent to (USD 300) which I and my wife have used to start poultry farming.* This according him has helped them to diversify their livelihood.

A woman from Bueryonye aged 28 stated *“since I could no longer mine nor get land to farm, I consulted my belated father's friend at Koforidua for support. However, after giving his supporting me for one and half years, he requested to have sex with me although I am married. I turned him down and so he has cut his support. Before then, my husband also used to go and work for him at his sawmill factory as a laborer, but after telling my husband about what he was asking of me, he has quit. Things are now difficult for us, but we hope to use the income we have to trade.* This may imply that, social capital may not be reliable. It may break at anytime.

Bridging social capital as stated earlier on has also been adopted as a coping strategy. Most of the farmers who have migrated to Odumase, the district capital, Accra and other cities have teamed up with two pressure groups, Kloma Gbi and Klo Hengme which are krobo groups made up of intellectuals putting pressure on leaders to be more responsive to the needs of Krobo's. Discussions with the Assembly man of the area revealed that, these pressure groups have made contact with them and they have started working with them in order to put pressure on the chiefs to be more responsive to their needs.

Social network therefore is very important to farmer livelihoods in the study areas as adversely affected households deploy it in the short term to earn a living and in the long run to pursue other livelihood activities. However, social capital is not accessed by all households. It depends on how strong or weak a household's network is and it can also come with some challenges that may negatively affect the household.

7.1.4 Migration as a coping strategy

Some informants mentioned migration as a coping strategy. By this, they explained that, a member of the household has migrated to take up jobs in cities like Accra, Tema, Koforidua, Odumase, Somanya in the wake of the shock of losing their land, limestone and the continuing trend of increasing food prices, shortage of land, uncertainty about the future and reduction in crop yield.

From the study, migration is not pursued by the entire farmer household but a member or a few members and they remit the remaining household to support them. It was also revealed that, the migration is not permanent but temporal. It revealed that, people are tied with their communities that when they migrate, they want to get enough money to return home and stay with their family and friends. One woman from Bueryonye community stated *“I migrated to Accra through the help of my friend who worked in a chop bar (local type of restaurant where local foods are prepared and sold). I pounded fufu (a local food prepared from cassava), prepared soup, and served customers together with other employees. The job was not paying so well, but it was enough to take care of my needs as I ate food freely and did not have to pay. I send money home to support my husband and our two boys. I had to return home recently because I fear my husband may go for another woman if I don't return and apart from that, I feel very incomplete without my family but now I've been here for two months and I will go back to Accra to continue with my job”*.

The above quotation though quite long is very revealing. It implies that, rural migrants may only get access to menial jobs which require low skills training in the city and hence low wages. These jobs however could offer migrant farmers the opportunity to get financial capital which they can deploy to support their families back home. The quote however also suggest that, there is an opportunity cost to forego which is sacrificing ones family's happiness in search of greener pastures which has the potential to disintegrate family ties. It implies that, farmers being aware of some consequences of staying out of home for long prefer to be temporal migrants.

Another farmer 29 years old from Bueryonye Stated *“I was fed up with life in the village. I moved out to Odumase and I heard on radio about some pressure groups (Klo Hengme and Kloma Gbi) so I contacted them and told them about our situation in the village. They went with me to meet the farmers and now we are working together with them to coerce Ghacem and the*

traditional council to help us'' This quote also reveals that migrant farmers continue to think about their situation back home and they tell their stories to people they meet in the city to help them fight injustice. This may imply that, farmers believe teaming up with learned intellectuals (who are seen to be more powerful) in the city may give them more power for social action. The quote also suggests that migration to the city has enhanced social capital base of farmers.

From the extracts above, it can be realized that people are capable agents but structures and processes that mediate their livelihoods can hinder or constrain their livelihoods. This agrees to the livelihood framework which recognizes effects of transforming processes and structures as they key elements that determine the vulnerability context of households. It also showed that households deploy different stocks of capital to cope in the wake of a shock or a pressure. The account also shows that individual's access to capital is important in defining the kind of livelihood they gain.

8 SUMMARY, CONCLUSION AND RECOMMENDATION

The purpose of this study was to make a small contribution to why the extraction of resources from a region does not often improve their livelihoods. The study aimed to highlight the role played by chieftaincy as a local structure and how it enhances or constrains people's access to mining induced benefits in mining communities in Ghana. It aimed at bringing to the fore, the important role chieftaincy plays in mining and how it impacts on livelihoods. It sought to show that the vulnerability context within which people pursue their livelihoods is created by the mediating structures and processes such as chieftaincy culture and power. The study also sought to investigate the coping strategies of people who are adversely affected in such contexts in the Bueryonye and Odugblase communities of Ghana.

Theoretical insights were drawn from the alternative development paradigm specifically the DFID Sustainable Livelihood Framework. Focus was placed on structures and processes, assets and coping strategies. Other concepts and approaches such as political ecology focusing on (power and rationality) and culture were used to support data analysis. The study was conducted in Odugblase and Bueryonye mining communities in the Manya krobo district of Ghana. Selecting the two communities was in order to have enriched data because both communities lost land to the same concession and are proximate. The study was conducted qualitatively. To understand the role of chieftaincy in mining and how this impact the livelihoods of mining communities, farmers experiences, culture, and how they live their everyday could best be studied by using interviews, focus group discussions, and observations to collect information from 34 primary informants (farmers and landowners) and 12 key informants. Secondary data from articles, newspapers, journals, and master thesis were used to supplement primary data. In line with the objectives of the study, the following findings and conclusions are made.

8.1 Chieftaincy as a mediating institution

The study revealed that chieftaincy has for a long time been the major form of local governance in Manya Krobo and Ghana as a whole. Chieftaincy as an institution to a large extent determines mining benefits that farmers and landowners in mining communities who are adversely affected get access to. They negotiate for and on behalf of these people with mining companies for compensation, corporate social responsibilities, and employment quotas. They are supposed to receive royalties paid by mining companies and redistribute it to the local people through provision of public goods or alternative livelihood activities. They set the rules of the game and their effectiveness, transparency, commitment or otherwise may determine how mining impacts the livelihoods of mining communities within their jurisdiction. It was found out that their role has constrained farmers and landowners access to mining benefits. The traditional council is engaged in land litigation and this has served as a barrier which has prevented it from accessing royalties which would have been redistributed to improve the lives of those adversely affected.

A chieftaincy culture of obedience does not encourage ordinary farmers and landowners to demand for accountability and transparency from the traditional council. This is because of the strong social norms of reverence to chiefs, fear of being branded as deviant as well as other consequences of general disobedience to chiefs. The culture of obedience therefore gave more power to the traditional council to rationalize their decisions. It was also revealed that power relations between the farmers and their chiefs have constrained farmers' representation in decision making.

Farmers perceive their chiefs to possess' spiritual powers and hence they wouldn't like to challenge them to incur the wrath of the gods or fines from their chiefs and even if they would want to, their cultural norms would simply not allow them. It was revealed that, chiefs used their power to rationalize their decisions whiles this was purposely to protect their own interest. Farmers' rationalities never counted because they do not have the power to rationalize it. A majority of informants believe that they would have been better off, if they dealt directly with Ghacem without their chiefs. Evidence from the research confirms the Livelihood framework's argument that the livelihood outcome of people or the livelihood people gain is a function of the structural context within which the live.

8.2 Impact on assets, vulnerability and coping strategies

The study revealed that mining has affected negatively the assets and livelihoods of farmers in the studied communities. It has however showed that this is largely due to the role of the chiefs as negotiators, receivers and redistributors of mining induced benefits. People now pursue their livelihoods in vulnerability context of physical, economic and psychological shock of loss of land and limestone coupled with trends of increasing prices of food and land. Informant's physical, economic, natural, social and human capital stock of capital has dwindled over the years due to mining whiles there have been no alternative livelihood programs initiated by the mining company for affected people. A few household which have a member of the household employed in the mines have however experienced an improvement in their livelihoods.

The study revealed that, in spite of all this, farmer's ingenuity and capability has enabled them to adopt other livelihood activities. Whiles some households pursue natural resource based activities like acquiring alternative land for farming, as a coping strategy, others pursue livelihood diversification like trading and migration as coping strategies. Some informants could be described as *loyal*. They accept the chieftaincy situation as it is and wouldn't like to challenge. They will rather accept things as they are and look for alternative land to farm. Some also could be described as *voice*. They are not willing to accept their situation. They have diversified their livelihoods and agitating for transparency and commitment of the traditional council to enable them benefit from mining to enhance their livelihoods. Others feel that they are fed up with the system and they have exited (*exit*). They however collaborate with the voice to rework the local situation. The voice and exit came out as the best. They are mostly the farmers who have diversified or migrate temporary.

8.3 Recommendations

- The traditional council must consult or hire law and mining experts in crafting future agreements as evidence shows that there are more limestone deposits in other krobo communities which may be granted out to Ghacem very soon. They must also as a matter of urgency consult other chiefs (Traditional councils) of Tarkwa, Obuasi, Prestea, Wassa where mining has been going on for ages to know how they deal with mining companies in order to put them in a better negotiating position. The Manya Krobo Traditional

council must know that asking the experienced for their experiences does not undermine their authority as chiefs. There regional and national house of chiefs could form committees that can advice chiefs on how to deal with mining companies. There must as well be administrative and financial training for chiefs for effective public administration.

- Compensation to affected farmers must not only take the form of crop compensation. It must not only be cash but should include alternative land to keep farmers who still wanted to farm connected to land. Land is an emotive issue and recognizing it as such within the general socio-cultural settings of our Ghanaian environment should cause policy makers and implementers to re-think their decisions when it comes to compensations for land in the mining sector. Cash that is paid out must be fair, prompt and adequate. The negotiation for what is fair, prompt and adequate should not only include the traditional council but must also include the landowners and farmers themselves. This will not only build trust but will also allow the affected people themselves to express their views. The number of times farmers till the land in a year must be factored into the agreement. Farmers must be aware of the number of years mining companies will operate on their land. The compensation principle should cover the asset pentagon (relating to the various capitals). It must cover both individual and community interest.
- The traditional council must strike a balance between fighting for what historically belongs to them and fighting for the interest of the people who they lead. Whiles they can pursue issues of litigation and consolidate their power or grips over land, they must not do it at the expense of the livelihoods of the people. They must as a matter of urgency adopt and implement the recommendation of the Regional Coordinating Council in order to access royalties to improve the livelihoods of those adversely affected. They must be aware of the livelihood implications for farmers as they fulfill their responsibility to the ancestors. It must be more responsive to the needs of farmers.
- The district assembly must allocate for instance 20% percentage of the monies accruing to them through the payment of conveyance fees by trucks that convey limestone from the district to Tema to the mining communities to put up public facilities such as pipe born water, toilet facilities and funds for alternative livelihood activities. Royalties which have compiled and may be accessed by the traditional council and the district assembly

after the land boundary conflict has been resolved must be used efficiently. It must first and foremost be used to improve the lives of those negatively affected before deploying the remainder for the benefit of the whole district and traditional area.

- The traditional council must involve the farmers in decision making and create mechanisms for the people to demand accountability. This will make farmers have trust in them. They must render accounts on all deals involving the people. Transparency will increase the benefits people gain from mining. The traditional council must be prepared to take serious actions against Ghacem if they do not oblige to the demands of the people.
- Ghacem must as far as practicable offer employment opportunities to the affected farmers and landowners and their relatives, provide employable skills for the youth, grant scholarships to wards of project-affected persons and pay monthly allowance to vulnerable groups. The traditional council must strike an employment quota deal with Ghacem that will see more of the local people being trained and employed. Evidence from the research suggest that the few households who have a member or more employed in the mines are living viable lives.
- The mining law must be very clear about who negotiates for compensations. It must enact a compulsory formula for compensation and other benefits which must be adhered to by mining companies operating in the country. This could be in line with the asset pentagon principle as stated above as it could reduce the local politics and exercise of power. The mechanisms for the distribution of royalties back to mining communities must be reviewed and there must be checks to make sure that it is used for the public good

8.4 Limitation of the Study and scope for further research

In chapter three sections 3.9, the limitations that characterized the data collection and research process were discussed. This section therefore highlights some of these issues but also goes beyond these.

- The study was based on farmers from two adjacent communities. The findings are scarcely representative of all mining communities in Ghana. Chieftaincy-farmer relations and influence may as well be different in rural and urban contexts.

- The linkage drawn between chieftaincy and mining may not be the same across the country due to the heterogeneity of ethnic groups and culture in the country.
- The inability to get the audience of the traditional council whiles on the field but rather through a phone interview may have affected the quantity and quality of information received.
- The study could be more focused. Instead of selecting informants from two communities, it could have rather focus on a few farmers from one community and probed in-depth.
- The perceptions of chieftaincy by the farmers may be peculiar to the area or circumstances in which they find themselves and may not represent the general opinion of all people in the area or other parts of Ghana. This perceptions could change from time to time.
- Decision processes are by their nature, relatively not transparent and hence it was difficult and demanding to gain insight in the negotiations between chiefs and Ghacem.
- The study could have focused stronger on political ecology probing more on power and politics on distributing cost and benefit to farmers and chiefs at the local level. This could be an area for further research.
- Further studies can be done on an assessment of farmers perceptions towards chieftaincy boundary conflicts in Manya Krobo.
- In a further study more focus could be placed on Ghacem which was definitely not the intension in this study.
- The gender dynamics of perceptions as well as impacts and coping strategies could as well be researched in further studies.
- Comparative studies in various mining communities can explore similarities and dissimilarities in conflicts, solutions and the local population strategies.

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APPENDICES

Appendix I:

Key informant Interview Guide- for Traditional Council, District Assembly, Assembly man, Village chief of Odugblase, Opinion Leaders and women leaders

Mining, Chieftaincy and Local Livelihoods: the case of Limestone Mining Manya Krobo

District of Ghana

Eric Tamatey Lawer

(M-Phil in Development Studies, Norwegian University of Science and Technology)

Topic: Limestone Mining, role of Traditional council (chieftaincy institution) and farmer's access to assets

Section A: Background

-Can you tell me about your position in this community?

- How long have you served in this capacity

Section B: Chieftaincy, Power, Culture and Farmers access to mining induced benefits

- In your opinion, has limestone mining enhanced the assets and as such livelihoods of farmers in Odugblase and Bueryonye mining communities?

- What are the reasons for your answer to the question above?

-Can you tell me about some of the benefits that accrued from mining to these communities so far?

- Do you think that farmers and landowners in these communities get access to mining induced benefits like compensation, royalties, and social responsibilities? Give reasons for your answer

- What role do you think the traditional council (Chieftaincy institution) played in the mining process and why did they play that role? Probe more

- In your opinion, do you think the traditional council enhanced or constrained farmers and landowners access to mining induced benefits?

- Could you please explain the reasons for your answer above?

- In your opinion, do you think that the situation could have been better if farmers and landowners dealt directly with Ghacem?

- Can you please elaborate on the land boundary conflict between the Manya Krobo and Yilo Krobo Traditional Councils and its impacts on farmers' access to royalties?

- In your opinion, can the traditional council be criticized for their decisions or policies, role and way of leadership especially their role in the mining process? Give reasons
 - Do you think the ordinary farmers and landowners can demand for accountability from the traditional council about mining benefits? Explain your answer?
 - Do you think the traditional council is responsive to the needs of the farmers? Explain your answer.
 - Why do you think it's the reason why the traditional council negotiated and access mining benefits and redistribute it to affected farmers instead of themselves dealing directly with Ghacem?
 - Is the traditional council trusted by the farmers who it represents?
 - Do you think chieftaincy is an efficient institution of local governance?
 - What role do you think the district assembly played? Has there been any conflict between the two institutions and how has it affected farmer's access to assets
- Do you visit the mining communities to ascertain for yourself mining impacts and how they are coping? Explain
- What do you think the council should do to make mining benefits the farmers and the mining communities positively?
 - Is there anything you want to add to what you have said? Thank you very much your time and cooperation.

Appendix II

Interview Guide- for Primary Informants

Mining, Chieftaincy and Local Livelihoods: the case of Limestone Mining Manya Krobo

District of Ghana

Eric Tamatey Lawer

(M-Phil in Development Studies, Norwegian University of Science and Technology)

Topic: Impacts of Mining on mining communities

Section A: Background

- Name of Village
- Sex of Respondent
- Age
- Status in household
- Educational Level
- Marital status
- Occupation
- Number of people in household

Section B: Impacts of Mining on Assets

- What is your present job or occupation?
- How long have you been engaged in this occupation?
- Are you still pursuing this occupation or you've changed? Explain your answer
- If you have changed your job, which of them was more profitable?
- What are some of the benefits that have accrued to your household from mining activities?
- In your opinion has mining positively or negatively impacted your assets and livelihoods at large? Please give details in relation to the asset pentagon
- Is any member of your household employed in the mines? If yes how many?

Apart from employment through which other ways has mining positively or negatively impacted your assets?

- Did you receive compensations from the mining company? Are you satisfied with it?
- Did you receive any form of training or educational support from the mining company? If no, what do you think is the reason?
- How has this affected your assets?

Role of chieftaincy in the mining process and impacts on farmers' assets (Culture and Power) and coping strategies of farmers

-What role did the traditional council play in the mining process and why did they play that role?

Probe more to find out issues in relation to culture and power

-Did the mining company offer you any compensation? Give details

-Were you involved in the process of negotiating for what form of compensation you want?

Probe more to find out why.

- In your opinion, do you think the traditional council enhanced or constrained your access to mining induced benefits? Give details

Are you satisfied with the impacts of mining on your livelihoods? Explain

- Do you think farmers could have been better off without the role of the traditional council?

Can you please elaborate on the land boundary conflict between the Manya Krobo and Yilo Krobo Traditional Councils and its impacts on your access to royalties?

- In your opinion, can the traditional council be criticized for their decisions or policies, role and way of leadership especially their role in the mining process? Give reasons

- Can you demand for accountability from the traditional council about mining benefits? Explain your answer?

- Do you think the traditional council is responsive to your needs? Explain your answer.

- Why do you think it's the reason why the traditional council negotiated and access mining benefits and redistribute it to affected farmers instead of themselves dealing directly with Ghacem?

- Do you trust the traditional council which represents you?

-Do you think chieftaincy is an efficient institution of local governance?

- What role do you think the district assembly played? Has there been any conflict between the two institutions and how has it affected farmer's access to assets

-What do you think the council should do to make mining benefits the farmers and the mining communities positively? Do you agree with their policies? Probe more

- How did you cope or are you coping with the loss of land and livelihood activity? Probe in line with natural resource based, diversification, social capital, migration etc?

- How profitable is your new livelihood activity or coping strategy?

- Would you say your coping strategy has improved your livelihood or made you vulnerable?

- Do you receive support from any relative, group or friends? Please give details
- Do you receive any skills or have you benefited from any alternative livelihood program sponsored by Ghacem? Probe to find out what they wished Ghacem and the traditional council should have done to help them cope.
- Is there anything you want to add to what you have said? Thank you very much your time and cooperation

Appendix III

Key informant Interview Guide- for Mining officials

Mining, Chieftaincy and Farmers Livelihoods: the case of Limestone Mining Manya Krobo

District of Ghana

Eric Tamatey Lawer

(M-Phil in Development Studies, Norwegian University of Science and Technology)

Topic: Impacts of Mining on mining communities

Section A: Background

- Can you tell me about your position?
- How long have you served in this capacity

Section B: Impact dimensions

- In your opinion how long has Ghacem operated in these communities?
- Would you say mining has benefited these communities?
- In your opinion, what are some of the benefits farmers and landowners derived from the mines in terms of livelihood activities, assets and opportunities?
- Would you say that they are satisfied with the benefits so far?
- In your view has mining impacted negatively or positively on farmers and landowners in this communities who have lost land and limestone to Ghacem?
- Is your company aware of negative impacts on the livelihoods of farmers and landowners? If yes, what are you doing to help the situation?
- Do you think your dealings with the chiefs instead of the landowners affect how mining impact their livelihoods?
- How did you consider the amount of compensation and royalties due them and how do you pay this?
- In your opinion what should be done to keep a good relationship with the mining communities? Are there others issues you want to raise? Thank you for your time and cooperation

Appendix IV: Some pictures from the mining site



