

**FACTORS INHIBITING ILLEGAL MINERS IN THE UPPER DENKYIRA
EAST DISTRICT IN THE CENTRAL REGION FROM REGISTERING
WITH THE MINERALS COMMISSION IN GHANA**

BY

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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF MPhil ADULT EDUCATION DEGREE**

JULY, 2014

DECLARATION

I hereby declare that except for references to works, which have been duly cited and acknowledged, this work presented was done by me as a Master of Philosophy Adult Education student of the University of Ghana, Legon.

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DEDICATION

The thesis is dedicated to my parents, Mr. Ishmael Wilson Parry and Mrs. Dina Parry.



ACKNOWLEDGEMENTS

I am bound in gratitude to an array of estimable individuals for the immeasurable contributions they made towards the completion of this thesis. I must mention, in particular, the Almighty God for His mercies, strength and wisdom upon me bestowed throughout the period of my stay and most significantly, the completion of this thesis.

Correspondingly, I am indebted to my supervisors, Dr. Isaac Kofi Biney and Dr. John Boateng for their critical review of this thesis. Also, I am grateful to Dr. Daniel Oduro-Mensah, Dr. S.K. Badu-Nyarko, Dr. Hayford Benjamin K. Kwarshie, Prof. Olivia Kwapong, Prof. Yaw Oheneba-Sakyi, Mr. Godfred Alfred Nii Sai Obodai-Sai, Mr. Delali Amuzu, Miss Sally Afriyie, Miss Ellen Maame Abakah, Mr. Seth Tsatsu, Miss Leticia Boahemaa Addo, and Mr. Mohammed Hamidu Damba, who deepened and widened my perspective through thought provoking lessons.

Furthermore, I very much acknowledge Mr. and Mrs. I. W. Parry, Miss. Florence Owusua Parry, Mr. Richmond Kwame Frimpong, Mrs. Elizabeth Mantebea Frimpong, Miss. Kathlyn Amoakosa Parry and Miss. Eunice Essenam Williams for the diverse forms of sacrifices made for me, without which I could not have completed this thesis.

I also wish to record my earnest appreciation to Mr. Ahedor, Mr. Emmanuel Osae-Quansah, Mrs. Dora Ofori Larbi Osae-Quansah, Miss. Ophelia Appiah, Mr. Alexander Hackman-Aidoo, Mr. Reginald Richard Ekow Mensah Crankson, Mr. Kofi Tandoh, Mr. Frederick Bentil, Mr. Kenneth Emmanuel Mensah, Mr. David Dompseh, Mr. Charles Thompson Jnr, and to all well-wishers at All Saints Anglican Church, Takoradi. To all others whose various contributions enhanced the quality of this research but to whom I may have forgotten to mention, I remain sincerely grateful.

TABLE OF CONTENTS

Contents	Page
DECLARATION.....	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
LIST OF FIGURES	viii
ABSTRACT	ix
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem.....	5
1.3 Purpose of the Study	6
1.4 Research Objectives.....	7
1.5 Related Research Questions.....	7
1.6 Significance of the Study	8
1.7 Limitation of the Study	9
1.8 Scope of the Study	10
1.9 Operational Definition of Terms.....	10
1.10 Organization of the Study	10
1.11 Study Area	12
CHAPTER TWO.....	15
REVIEW OF RELATED LITERATURE.....	15
2.1 Introduction.....	15
2.2 THEORETICAL FRAMEWORK.....	15

2.2.1 Symbolic-Interaction Theory	15
2.3 REVIEW OF RELATED LITERATURE	18
2.3.1 Historical Development of Mining in Ghana.....	18
2.3.2 History of Mining Regulation in the Early 1900s	20
2.3.3 Current Mining Regulation in Ghana.....	22
2.3.4 History of Small Scale Mining in Ghana	26
2.3.5 The Operating Environment of Small Scale Mining.....	28
2.3.6 Approaches Adopted to Discourage Illegal Mining in Ghana	29
2.3.7 Demographic Characteristics of Illegal Miners	33
2.4 FACTORS AFFECTING REGISTRATION OF ILLEGAL MINERS	36
2.4.1 Political Factors.....	36
2.4.2 Economic Factors	43
2.4.3 Socio-Cultural Factors.....	44
2.4.4 The Role of Non-Participation in Policy Formulation	50
CHAPTER THREE	58
METHODOLOGY	58
3.1 Introduction.....	58
3.2 Population	58
3.3 Sample and Sampling Procedures.....	58
3.4 Research Design	59
3.5 Research Instruments	60
3.6 Reliability and Validity.....	61
3.7 Fieldwork and Administration of Research Instruments	62
3.8 Ethical Considerations	63
3.9 Data Analysis.....	64

CHAPTER FOUR	66
ANALYSIS OF DATA AND PRESENTATION OF RESULTS	66
4.1 Introduction.....	66
4.2 Demographic Characteristics	66
4.3 Political Factors	67
4.4 Economic Factors	80
4.5 Socio-Cultural Factors	84
4.6. Non-Participation in Policy Formulation.....	90
CHAPTER FIVE	93
DISCUSSION OF RESULTS	93
5.1 Introduction.....	93
5.2 Political Factors	94
5.3 Economic Factors	103
5.4 Socio-Cultural Factors	107
5.5 Non-Participation in Policy Formulation.....	112
5.6 Conclusion	114
CHAPTER SIX	115
SUMMARY, CONCLUSION AND RECOMMENDATIONS	115
6.1 Introduction.....	115
6.2 Summary of the Study	115
6.3 Major Findings of the Study	118
6.3.1 Political Factors.....	118
6.3.2 Economic Factors.....	119

6.3.3 Socio-Cultural Factors.....	119
6.3.4 Non-Participation in Policy Formulation	119
6.4 Implication to Adult Education Policy and Practice.....	119
6.5 Conclusion	123
6.6 Recommendations.....	124
6.7 Areas for Further Studies	125
REFERENCES	126
APPENDICES: QUESTIONNAIRES	136

LIST OF FIGURES

Figure	Page
1.10 Organization of the study	11
1.11: Map of Study Area	14
2.4.4.2: Arnstein's Ladder of Participation	54
4.1: Opinion of Illegal Mining	70
4.2: Responses on the Role of Government Officials	78
5.1: Framework on Factors Inhibiting Miners from Registering	94

ABSTRACT

Hilson (2001) posited that illegal mining has been with us for many centuries. This is eminent as a historical trace of this phenomenon has been confirmed by various writers such as Allers, Ocansey, Yakubu and UNESCO. The rate at which this phenomenon is occurring has been increased despite its existence for centuries. In line with this, the Minerals Commission of Ghana (2013) indicated that 80% of small-scale miners within the Upper Denkyira East District have not registered. Based on this fact, the study sought to find out factors that inhibit miners from registering their activities. In line with this, the study sought to achieve the following objectives:

1. To discover the political factors that inhibits illegal miners from registering with the Minerals Commission.
2. To identify the economic factors that inhibits illegal miners from registering with the Minerals Commission.
3. To find out the socio-cultural factors that inhibits illegal miners from registering with the Minerals Commission.
4. To find out the extent to which non-participation in policy formulation could inhibit the illegal miners from registering with the Minerals Commission of Ghana.

To achieve these objectives, the study employed a qualitative case study research design. In furtherance to the methodology, the study employed purposive and convenient sampling procedures. Dunkwa-On-Offin and Kyekyewere communities were selected purposively. Also, two groups and thirty-two respondents were selected made of twenty-two miners, five owners (bosses), two officials from the Minerals Commission, an official each from the District Assembly, Environmental Protection Agency (EPA) and the Lands Commission. The study used focus group guide and interview schedules as instruments for data collection. Findings from the study revealed that the issue of bureaucracy, corrupt

government officials, corrupt security officials, huge amount of money needed, huge size of land required, availability of buyers, lack of environmental education and non-involvement in policy formulation were the major factors that are inhibiting them from registering their activities with the Minerals Commission. Based on the findings, the study recommends that various policy makers such as the Government of Ghana (GoG), Minerals Commission, Lands Commission, Environmental Protection Agency, Ghana Police Service and other stakeholders should amend registration processes and policies with regards to mining activities in Ghana.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It is a well-known fact that illegal mining is not a new phenomenon, in fact, it has been happening all over the world for many centuries (Hilson, 2001). The problem is that it is now occurring at a much faster rate, therefore, not leaving enough time for the land to replenish and regenerate itself. The greater demands placed on the land by an ever-increasing human population is putting a great strain and drain on the earth's limited natural resources and the further degradation of the environment. From the global perspective, according to Human Rights Watch (2012), India's mining sector is rife with illegality, some of it viscerally shocking and some of it relatively arcane. The most brazen criminality involves the extraction of minerals from a land that a mine operator has no legal right to work on, commonly referred to as "illegal mining." In some cases, this takes place in deep hidden isolated forests, or centres around rapid fly-by-night operations with only a handful of machines and labourers working in a very small area.

According to the Shah Commission Report (2012), it is reported that India's parliament convened a commission of inquiry into illegal mining headed by one retired Supreme Court Justice, M.B. Shah. Shah's interim report, submitted in early 2012, found that there was enormous and large scale multi-state illegal mining of iron ore and manganese ore running into thousands of ore every year, having several exceedingly harmful and evil effects on the national economy, good governance, public functionaries, bureaucracy, public order, law and order. He revealed that it had encouraged huge corruption at different levels in public life, mafia in society and money power. He advised that it ought to be stopped immediately and effectively. According to Mines Minister Dinsha Patel,

there were at least 82,000 cases of illegal mining in 2010 and another 47,000 between January and September 2011, some presumably involving multiple incidents linked to the same operations.

Again, driven by the world demand for gold, within past years there has been a rapid expansion of illegal gold mining activities in regions of eastern Indonesia such as North Sulawesi's Minahasa Peninsula. The Manado based environmental group, Yayasan Bina Cipta AquaTech, has reported active mining in more than 100 illegal mines spread over five or six different sites within this region. The illegal mines or "trommels" (derived from the Dutch term for barrel) are crude mills that use mercury to remove gold from the host rock. Once the gold is extracted, the waste rocks or tailings, which include excess mercury, are placed into the large barrels (Kambey et. al, 2001). These barrels are disposed off by simply burying them along the side of the mining site typically within walking distance of the river. Mercury then enters the aquatic system during the gold extraction process or through the leaching of waste from the barrels. It is obvious that apart from the financial resources the nation is losing as a result of the activities of these illegal miners, the mercury levels in fish taken directly from the mining region for human consumption raises high concern due to the possibility of the nation's loss of its human resource.

At the national front with respect to illegal mining, it has been observed by Ghanaians that some Chinese illegal miners have caused great havoc to the nation due to their illegal mining activities. It must be acknowledged, however, that these activities cannot be attributed to only Chinese but rather Ghanaians and other nationals as well. Interestingly, the laws of Ghana embrace small scale mining only on condition that the miners register with the Minerals Commission of Ghana. This is so primarily because of the hazardous

nature of their activities. Hence there are various agencies of the environment that regulate their activities in order that it would not have negative impacts on the environment. With respect to all the efforts that government and other stakeholders have made in the quest of reducing environmental degradation, there rather seems to be an increasing trend in activities that have to do with environmental degradation. This is more visible, especially in the area of indiscriminate mining, putting into consideration the negative effect these activities have on the community and national development and sustainable development at large.

According to the Minerals Commission (2013), a huge number of small-scale miners within the Upper Denkyira East District have not registered with the Commission, for which reason the environment still stays at risk of degradation and its inevitable consequences. Not only that, but the financial resources the nation is losing, and will continue to lose if the situation is not saved. The number of illegal miners in the district, according to the Minerals Commission, is estimated to be two thousand one hundred and twenty (2,120), representing illegal miners from fifty three (53) illegal sites which are made up of at least forty people each.

The factors that give rise to illegal mining by the miners not to register their activities with the Minerals Commission stands largely unknown but the researcher seeks to explore and speculate through personal observation.

It appears that the illegal miners, most of which might have abandoned their previous occupations because of issues relating to income, are required to have some specified number of acres of land as concessions before they can be given licenses. Therefore the

inability of these illegal miners to acquire the concessions before they are given licenses may be the reason for which they cannot register, even if they would want to. Perhaps even when the illegal miners have acquired their concessions, the amount of money they will need in order to register it might be too huge to the extent that their inability to find that amount of money will mean that they cannot register.

Perhaps they are also required to go through bureaucratic procedures during the registration process. It is in this regard that Jennings (1998) argues that small-scale mining is bedeviled with too many regulations that are mostly designed to constrain it and too few inspectors to ensure that they do. He posits that when regularizing informal sector operations, 'the issue is not one of regulation per se but of the form of regulation' (Roberts, 1994: 8). Lagos (1995) describes how inappropriate regulations can impede the formalization of such operations.

Perhaps, the reason why 'galamsey' is deeply rooted could also be due to the disagreements between the local chiefs and the government over who has authority over traditional land in that particular town or district. In Ghana, chiefs play important roles in the mining industry. They oversee the compensation processes and spearheading negotiations concerning land transfers to companies. Perhaps even more importantly, despite mineral rights being vested in the presidency, chiefs playing no role in the approval of a mining concession but rural inhabitants still see them as figures of authority. Due to these disagreements, it might be that the illegal miners pay huge sums of monies to the local chiefs for which reason they do not find the need to register with any other body.

It also seems that the illegal miners are just greedy, wanting to get everything for themselves without giving the state its due. It is to this effect, in order to clear all doubts in the minds of Ghanaians, that this research is being conducted.

1.2 Statement of the Problem

Ghana News Agency (2013) issued a statement in which an official of Minerals Commission is reported to have stated that only 20% of operators engaged in small-scale mining activities in the Upper Denkyira East District are operating within the confines of the law. This gives a clear indication that the remaining 80% of the mining operators are engaging in the activities through the illegal procedure. This brings about three major concerns.

First, due to the nature of illegal mining, it gives little or no room for government to regulate their activities which inevitably leads to environmental degradation which manifests itself especially in the form of pollution of water bodies. Second, there is an indication from the Minerals Commission that the government gains a huge percentage of revenue from the small scale mining sector. If it turns out that about 80% of those engaged in these practices are not registered by the Minerals Commission, then indeed, it stands to reason that apart from the high risk of accidents or deaths that these illegal miners are prone to, the government is also losing a lot of revenue from the activities of these unregistered illegal miners. Third, apart from the financial resources that the nation loses, it also loses its human resources due to the dangers with which their activities are characterized. Various scholars such as Aryee et.al. (2003), Ocansey (2013) just to mention but a few, have written extensively on environmental degradation with particular emphasis

on illegal mining. However, too much attention has been given to the negative effects of the activities of these illegal small scale miners on the environment.

It is therefore incomprehensible that despite the three major concerns highlighted in preceding paragraphs, the activities of these illegal miners seems to rather be on the increase. This presupposes that there are reasons discouraging the illegal miners from registering with the Minerals Commission. Until these reasons are found out and attended to, this menace of illegal miners causing damage to our environment, depriving the nation of huge revenue and destroying the human resource will continue to extensively hinder the development of the nation. On the basis of the above supposition, the question to be answered then is: what are the factors that are inhibiting illegal miners from registering with the Minerals Commission?

1.3 Purpose of the Study

It is usually said that if a problem has to be solved once and for all, then the root cause of it should be known so that appropriate action can be taken and solutions given to it. It is against this background that this study is being conducted. Its main purpose is to conduct an in-depth study which will bring out an in-depth understanding of the reasons or concerns of these illegal miners that deter them from registering with the Minerals Commission.

With this, their activities can be regulated to avoid the degradation of the environment, to prevent the nation from losing its revenue, to also save the illegal miners from the abuse they suffer from the police which results in deaths, and to finally, suggest effective ways of getting these illegal miners to register with the Minerals Commission.

1.4 Research Objectives

The main objective of the study was to identify the factors inhibiting illegal small scale miners from registering with the Minerals Commission. The specific objectives underlying the study were to:

1. Discover the political factors that inhibit illegal miners from registering with the Minerals Commission.
2. Identify the economic factors that inhibit illegal miners from registering with the Minerals Commission.
3. Find out the socio-cultural factors that inhibit illegal miners from registering with the Minerals Commission.
4. Find out the extent to which non-participation in policy formulation could inhibit the illegal miners from registering with the Minerals Commission.

1.5 Related Research Questions

In embarking upon such a study, certain related questions should be asked and answered before any credible conclusion can be drawn. Therefore, the related questions which were posed to guide the study were:

1. What is the level of knowledge of these illegal miners with regards to the Minerals Commission?
2. How do administrative procedures deter the illegal miners from registering with the Minerals Commission?
3. Are the illegal miners aware of the illegality of their activities?
4. What is the level of knowledge of these illegal miners regarding policies and regulations governing mining in Ghana?

5. How do the attitudes of government officials influence the decision of the illegal miners not to register with the Minerals Commission?
6. How do financial/economic requirements inhibit these illegal miners from registering with the Minerals Commission?
7. What role do chiefs play as far as the refusal of the illegal miners to register with the Minerals Commission is concerned?
8. How does non-participation in policy formulation influence the decision not to register?

1.6 Significance of the Study

As it stands now, the nation is fighting a losing battle because it remains largely unknown the exact reasons underpinning the reluctance of illegal miners from registering with the Minerals Commission. This study will inevitably contribute in bringing to the fore the reasons for which illegal miners refuse to register, thus, adding to the existing body of knowledge.

Having been made aware of the various factors that influence the decision of these illegal miners not to register with the Minerals Commission, policy makers and various stakeholders such as the Ministry of Natural Resources, the Minerals Commission, Environmental Protection Agency, Ministry of Local Government and Rural Development, National House of Chiefs etc will then design and implement relevant policies that will factor into it all the reasons that were given by the illegal miners so that the problem of environmental degradation with its inherent environmental problems will be curbed. Not only curbing environmental problems, but also, fetching the nation some financial resources for national development.

The study will equally offer key stakeholders in mining and assemblies the kind of education to be rolled out to sufficiently inform and empower illegal miners to become conscious of their activities.

1.7 Limitation of the Study

There were some few challenges that the researcher faced. Prominent among these challenges was the reluctance of the illegal miners to give out the relevant information needed due to fear of being exposed. The researcher, therefore, was able to overcome this challenge by getting a key informant, who also happened to be an illegal miner, from the Minerals Commission Official at Dunkwa-On-Offin. Their fear was thus reduced due to the sight of their own colleague in the researcher's company.

Furthermore, there was a challenge with respect to finances. The respondents, especially the illegal miners, wanted some form of refreshment before giving the information. This was because the researcher took part of their time of which they could have obviously used in engaging in some other important activities of theirs. Standard of living too in the communities was on the high side. Accommodation at a guest house ranged between one hundred cedis to one hundred and fifty cedis per night. The researcher, together with his assistants, lodged in a village at the outskirts of Dunkwa-On-Offin to allow him save more money to refresh the respondents.

Finally, it rained heavily during the period the researcher was collecting data. Apart from the fact that the rain beat the researcher and the instruments getting wet, it again displaced most of the respondents so it delayed the data collection period. The researcher, and his

assistants, had to print new research instruments and reschedule the meetings with the respondents.

1.8 Scope of the Study

The study was limited to only illegal miners in selected towns within the Upper Denkyira East district. Though there are several districts in the Central Region, this district was selected, because that is the area where the Minerals Commission has raised concerns due to the large percentage of illegal miners who operate in the district.

1.9 Operational Definition of Terms

Illegal Mining/Galamsey

Unregistered mining activities of any group of people.

Political Factors

Administrative processes and attitude of government officials.

Economic Factors

It will be directly limited to monies involved in the registration process.

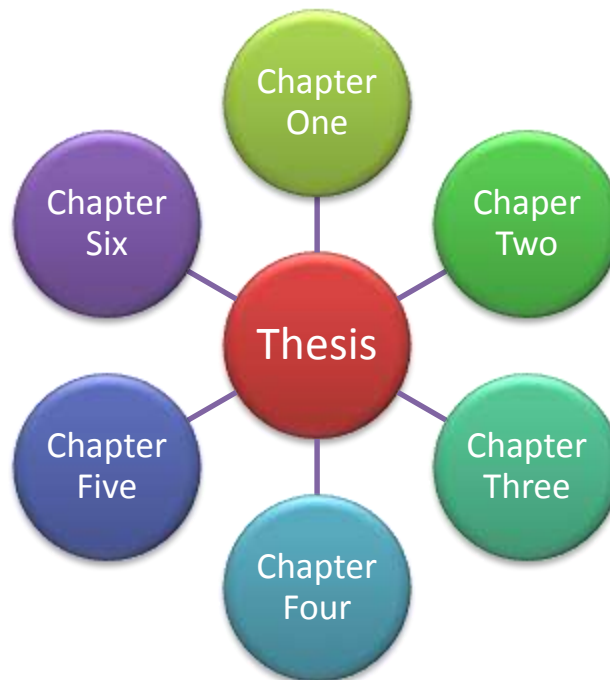
Socio-cultural Factors

In the context of the study, the term socio-cultural factors connote roles of the chiefs and environmental education in the district.

1.10 Organization of the Study

The study was conceptualized into six chapters as depicted in figure 1.10.

Figure 1.10: Organization of the Study



This study was organized into six chapters. Chapter one sought to deal with the background and rationale of the study, statement of the problem, objectives of the study, related research questions, significance of the study, limitations of the study, scope of the study, operational definition of terms and the study area. Chapter two dealt with the theoretical/conceptual frameworks and review of literature which is related to the topic under study. It considered the concept of community, the concept of participation, the various factors that inhibit illegal miners from registering with the Minerals Commission, the various approaches government has adopted in addressing the issue of illegal mining, alternative livelihood programmes, among others. Chapter three, also dealt with the methodology, discussed the population, sample, sampling procedures, research design, instrumentation, pre-test, validity and reliability, data collection and data analysis. Chapter four was dedicated to the analysis of data and presentation of results, while chapter five dealt with the discussion of the results. Chapter six, which is the final chapter, sought to give a summary of the major findings, conclusion and recommendations.

1.11 Study Area

Upper Denkyira East is one of the thirteen Administrative Districts of the Central Region. It lies within latitudes 5°. 30' and 6°. 02' north of the equator and longitudes 1° W and 2° W of the Greenwich Meridian. The District shares boundaries with Adansi South District in the north, Assin South District in the east and Twifo-Hemang-Lower-Denkyira District in the west and Upper Denkyira West District. The Upper Denkyira East Municipality covers a total land area of 1,020 square kilometers, which is about 10% of the total land area of the Central Region. The district falls within the semi equatorial zone with its respective characteristics. The mean annual temperatures are 29° C on the hottest months and about 24°C in the coolest months. There are two rainfall regimes, but the total annual mean rainfall is between 120cm and 200cm. The first rainy season is from May to June with the heaviest in June, while the second rainy season is from September to October. The main dry season is from November to February.

Upper Denkyira East district falls within the semi-deciduous forest zone. It consists of three layers, which does not differ much from the rain forest. The trees in this forest zone do not shed their leaves at the same time nor are they of the same species. Trees of the lower layer and some of the topmost layers stay evergreen throughout the year. This is due to the generally moist condition of the area. Due to increasing cocoa and mining activities in the area, especially in the northern part of the district, very little of the original forest remains, and most of what is left are secondary forests. The forest contains various valuable timber species such as Mahogany and Wawa.

The rocks in the district are predominantly of Birimian and Tarkwaian formation. The Birimian formation consists of metamorphosed sediments as phyllites, schist and lava. This accounts for the district's rich mineral deposits particularly alluvial gold deposit along the valleys of river Offin and its tributaries.

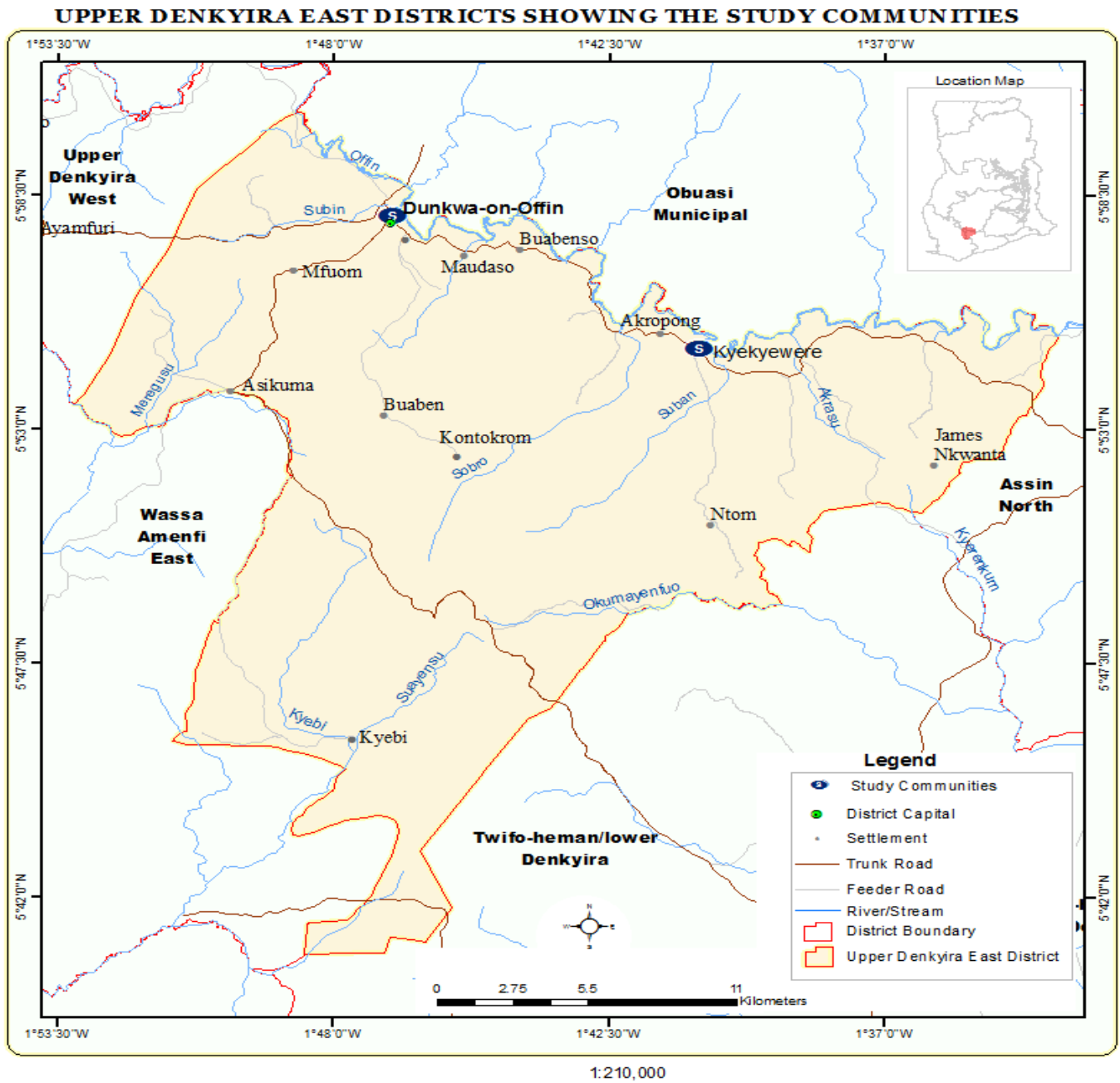
The principal soil found in the area is forest ochrosols. The colour of these soils range between brown and orange. The soil is not highly leached as oxysol. Due to the reduction in the amount of rainfall, the soils contain greater quantities of soil nutrients and are generally alkaline.

From the view point of crop production, they are the best soils in the country. Tree crops such as cocoa and oil palm thrive in the area. Cocoa covers about 50% of the districts entire arable land. Other crops like cassava, plantain and maize also do well.

Agriculture constitutes the main economic activity of the district economy. It employs about 58% of the district population. The farming population is 99,116, including fishermen. Agricultural production in the district is on two levels: the subsistence level involves 70% of the farming population while the commercial level involves the remaining 30%. The three main sectors of agricultural production comprise crop, animal production and fishing. Important crops grown in the district include cocoa, cassava, plantain, oil palm, maize, citrus and pineapple.

The supporting major economic activity in the district is mining. About five (5) different minerals are deposited in the district. These are gold, bauxite, manganese, clay and kaolin. Upper Denkyira East District throughout the past years has contributed its quota in the area of mining to Ghana. The district is endowed with gold mineralization, notable is the alluvial deposits that spans the banks of the Offin River. There are also hard rock gold mineralization within Ayanfuri and other areas in the district. There are about nine companies that hold large scale mineral right within the district. Notable among them are Anglogold Ashanti and Dunkwa Continental Goldfields.

Figure 1.11 Map of Study Area



CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This section is dedicated to review of the works of several authors in text books and journals that are related to the research. Again, it reviews and discusses related theories and indicate how these theories relate to this study.

2.2 THEORETICAL FRAMEWORK

2.2.1 Symbolic-Interaction Theory

This study seeks to find out the factors inhibiting illegal miners from registering with the Minerals Commission which will inevitably make it a necessity to give a theoretical framework on public perceptions. The theoretical model that best explains how perceptions are formed is symbolic-interactionism. Blumer (1969) posits that symbolic-interactionism states that people act toward things based on the meaning those things have to them; and these meanings are derived from social interaction and modified through interpretation. The model is appropriate for this study because it allows the reader to understand how public perceptions are influenced.

Weber (1978) asserts that individuals act according to their interpretation of the meaning of their world. According to Anderson and Taylor (2009), symbolic interaction theory analyzes society by addressing the subjective meanings that people impose on objects, events, and behaviours. Subjective meanings are given primacy because it is believed that people behave based on what they believe and not just on what is objectively true. Thus, society is thought to be socially constructed through human interpretation. People interpret

one another's behaviour and it is these interpretations that form the social bond. These interpretations, according to Anderson and Taylor (2009), are called the "definition of the situation". Anderson and Taylor (2009) give an instance and ask why young people would smoke cigarettes even when all objective medical evidence points to the dangers of doing so. The answer is in the definition of the situation that people create. According to Anderson and Taylor (2009), studies have found that teenagers are well informed about the risks of tobacco, but they also think that smoking is cool, that they themselves will be safe from harm, and that smoking projects a positive image to their colleagues. So, the symbolic meaning of smoking overrides those actual facts regarding smoking and risk.

Mention has to be made, however, of the fact that symbolic-interactionism is founded on the analysis of three major premises. First, human beings behave toward things based on the meaning those things carry for them. "Things" encompass anything from physical objects like tables and chairs, to other humans, institutions, guiding ideals, activities of others, and situations that arise as part of daily life. The second premise rests on the idea that the meaning of these things is derived from the social interaction one has with other humans that are part of one's life. The third and last premise is that these meanings are modified through an interpretative process employed by the person dealing with the things he or she might encounter.

Vilar and Inglesa (2001) assert that social participants in a social situation are constantly negotiating a shared definition of the situation, taking one another's viewpoints into account, and interpreting each other's behaviour prior to implementing an action. These three premises are fundamental to the understanding of human group life and human conduct.

With regards to the above supposition, it can be deduced that the way and manner in which the illegal miners in the Upper Denkyira East District perceive authorities might be the reasons why there is usually the reluctance to register with them. As stated above, the illegal miners' decision or reluctance not to register their activities might be due to what they have heard about the authorities, what they have seen, what they feel etc. It therefore stands to reason that if they have witnessed their colleagues who have registered with the appropriate authorities and are not benefitting from the registration of their activities, there is usually a high tendency of them being reluctant when the issue of registration comes up for discussion. In the same vein, if they always receive complains from their colleagues who have registered with the Minerals Commission, probably in relation to the bureaucratic nature of the registration process, it definitely affects their desire to register negatively.

To add to the above paragraphs, McClusky (1970) states that he might know what he says but would not know what you hear. I know what I show but I do not know what you see". It can therefore be argued that irrespective of the fact that there has been so much education in the system with regards to all the negative impacts illegal mining activities brings, the illegal miners seems not to have been enlightened with this kind of education. This is because they (illegal miners) might have a totally different understanding of the import of the education. They might even have cause to interpret it to mean differently and misunderstand the message to mean the authorities just finding something to tell them in other for them to quit their illegal activities.

2.3 REVIEW OF RELATED LITERATURE

2.3.1 Historical Development of Mining in Ghana

West Africa has for centuries been one of the world's most important gold mining regions. Today the most significant gold producing country in this area is Ghana. Prospective gold regions are localized in the western part of the country. Numerous hard rock deposits can be found and significant quantities have also been re-deposited in local water-bodies known as alluvial gold. These gold deposits enhanced the development of many successful ancient West African civilizations, and attracted both Arabic and European merchants. The country of Ghana has its name from the Ancient Kingdom of Ghana, which was located about 800 km north of present Accra. Ghana was first mentioned in an Arabic source 788-93 when the trans-Saharan trade with the western savannah started. According to Hilson (2002), the gold trade brought increased wealth to West Africa but ancient Ghanaian society was already in an advanced economic and political state.

Pre-colonial gold mining operations were extremely simple. Alluvial mining was most widespread and practiced along rivers. Sediments were scooped from the shores, stored in canoes or bowls and washed repeatedly to separate gold particles. Shallow-pit, surface mining and deep shaft mining also occurred along the line. At the beginning of the Trans Saharan trade, gold was collected as dust or nuggets by rural inhabitants, but increasing demand from Arabic traders intensified gold production. Hilson (2002) argues that for 700 years, the Islamic world was the only external influence on West Africa. Due to acute gold shortage during the 15th and 16th centuries, Europe's interest in West Africa increased. In 1471 the Portuguese reached present day Ghana and gained control of the West African gold trade. The arrival of the Europeans simulated a shift in activity towards the Gulf of Guinea coastlines. The Portuguese settlement in West Africa lasted for some 100 years.

They constructed a number of forts along the coast facilitating trans-continental gold trade and preventing other Europeans from being engaged in the trade. In 1595, the Dutch landed in the Gold Coast and the overtaking of fort Elmina in 1642 signified the end of the Portuguese occupation. The English soon challenged the Dutch. During the 16th, 17th and 18th centuries the Dutch West India Company and the British West African Company of Merchants were extremely active in gold mining and trade in West Africa. Towards the end of the 16th century, the slave trade began. Trading of gold decreased but was not abandoned though no advancements and improvements of mine design and extraction were made. Britain finally got control of Ghana in the mid-1800s, establishing the Gold Coast Colony in 1874 (Hilson 2002).

The earliest European attempts to extract gold on a large scale were concentrated in Tarkwa and Prestea in the late 19th century. The first official European gold mining company was the African Gold Coast Company, registered in February 18th, 1878. A number of other companies were established in Tarkwa at this time. The majority of these companies failed due to various reasons, and it was not until 1895, when a series of gold mines opened in Obuasi which brought about the increase in gold production. A gold rush in the early 20th century was followed by a mass increase in gold production. After this, the gold production decreased, but experienced a gold rush after the First World War. Ghana is endowed with bauxite, diamonds, gold and manganese. However, the mining sector has been dominated by the gold industry over the years, in terms of foreign exchange earnings. For example, the share of gold in total earnings from all minerals stood at almost 89% in 1988, and rose to 90% in 1994. Mining dates back to the pre-colonial days and even continued secretly under ban through the colonial days to post-colonial era becoming a major economic activity in rural communities' in the 1980s. The country's

mineral endowment potential is well known internationally and documented (Keatley, 1992, Strongman, 1994).

2.3.2 History of Mining Regulation in the Early 1900s

In 1902, the mines department was set up by the British government to regulate the activities of mining in the then Gold Coast. The department performed its functions in conjunction with the traditional authorities in the mining communities. Their roles included the granting of concessions and monitoring the technical, administrative and social aspects of mining. The mining companies were private companies, which implied that the Gold Coast government implemented privatization policy on mining. According to Agyepong (1987), concerns about the land and environmental degradation have been expressed since the early decades of the twentieth century notably since the 1930s. Due to this, Mining Rights Regulations Ordinance was introduced in 1925. During this period, mining activities concentrated on underground mining so there were not much environmental problems.

When Ghana gained independence in 1957, the then Prime Minister nationalized all the mining companies hence emphasis was shifted from privatization to state-owned. It must be emphasized here that mining at that time had minimal environmental effects and conflicts were absent, as almost all the mines were underground concessions and the communities had smaller populations. Several ordinances were passed during this era to regulate the activities of the mining companies which were then state-owned. This was because after the then Prime Minister had succeeded in annexing power from the colonial government; he wanted to directly control the mining companies. Strong (1994) posits that

when President Nkrumah was over-thrown in 1966, Ghana went back to privatization policy.

During President Acheampong's era, the government took over majority of the mining companies and left a few in the hands of the private sector. When he was over-thrown, the government privatized the mining sector. This is notable of the fact that a vision for the mining industry in Ghana was missing. Between the early 1950s and the beginning of the 1960s, several enactments empowered various official agencies to exercise executive responsibilities as far as the care and protection of the environment and resources, including mining were concerned. In addition, a number of research institutes were established. The responsibilities for environmental resources were therefore widely distributed, with no one agency having an oversight of the wider environment or significant portions of it. After the mining boom in the 1960s, mining output started declining due to inefficiencies of management, and direct state control (World Bank, 2001).

For decades, up to the 1980s, no new mine was opened in Ghana due to a myriad of problems faced by the mining industry. Investors and potential investors alike were unwilling to invest in the sector, as a result of the disabling economic, financial, institutional and legal framework within which the sector operated. Ghana became economically bankrupt in 1980 (World Bank, 2001). By 1983, there were just four gold mines producing 236,000 ounces. Beginning in 1983, Ghana implemented International Monetary Fund (IMF), Structural Adjustment Programmes (SAPs) and Economic Recovery Programme (ERP) focused on export-led growth, which included measures to devalue the currency and remove various barriers to trade. Upon the advice of the IMF,

Ghana relaxed mining regulations, nurtured investment by the mining industry through generous incentives and tariff reduction during the mid-1980s and 1990s (World Bank, 2001).

2.3.3 Current Mining Regulation in Ghana

In March 1988, the government of Ghana initiated a major effort to put environmental issues on the priority agenda. The exercise culminated in the preparation of the strategy (Environmental Action Plan, 1991) to address the key issues relating to the protection of the environment and better management of renewable resources. The Environment Action Plan (EAP) which provided a coherent framework for intervention deemed it necessary to safeguard the environment.

One major principle of sustainable development, which was the key word, was to provide a framework for integrating development and conservation, in terms of laws, institutions, and policies. The Plan sets out an environmental policy for Ghana and makes the attainment of a high quality environment a key element in the country's socio-economic development. It also provides guidance and sets out an action-oriented strategy that specifies the role of sectoral Ministries, Agencies, Non-Governmental Organizations (NGOs), and indeed, every Ghanaian in its implementation. It is recognized that the realizations of the objectives in the EAP and the national environmental policy can be attained only through collaboration and cooperation among institutions with responsibility for various aspects of resource management and environmental protection (Environmental Protection Council, 1991).

The Ministry of Environment Science and Technology, an advisory National Committee for the Implementation of Agenda 21, and a fully mandated environmental administration were established. This administration advocated a progressive attitude towards environmental management in this relatively fast developing country. This sectorial arrangement of institutional responsibilities has been a characteristic of the management of the environment and resources in the country. Twenty-two departments, commissions, corporations, and institutes have been identified in Ghana as having responsibility for land and management of other resources (Minerals Commission, 1998). Responsibilities range from policy formulation, survey and evaluation, planning, production, conservation, research, and training to monitoring. The generous fiscal concessions granted in the Mining and Minerals law of Ghana (PNDC Law 153 of 1986) contributed to the increased investment in the extractive sector of the country.

At the institutional level, the Ghana Chamber of Mines (GCM) played a virtuous role in coordinating activities in the industry on behalf of its members. All the major firms in the industry are members. A key objective of the GCM is the formulation of proposal for legislation, regulations, byelaws and all measures, which will impact positively on the mining sector (Ghana Chamber of Mines, 1996).

The Government of Ghana regularized the activities of small- scale miners in 1989 through the Small Scale Gold Mining Law (PNDCL 218). Government's main objective for the mining sector at the commencement of the ERP was to quickly attract investments into the sector to help turn around the general economy optimal of the country. In spite of all these efforts by successive governments coupled with poor implementation of the ERP, the problems of achieving an ecologically and environmentally comprehensive perspective on

resources and the resource processes in these circumstances are many and have impeded optimal management.

Problems still existed in developing the relevant concepts and the institutional framework to take in the functions of a single agency charged with overseeing the varied facets of the environment. Environmental management continued to be *ad hoc* and sectoral through the specialized committees of the EPC, for example, natural ecosystems, human settlements industrial pollution, water, and hazardous chemicals. The environmental problems persisted and increased in occurrence and intensity. Notable were deforestation, soil erosion, air and water pollution. Decision reached by the committees could not be effectively implemented, and the EPC had to rely on the goodwill and understanding of the Ministries and Agencies concerned. The EPC was criticized of taking over the responsibilities of other institutions owing to the inability of these agencies to perform their assigned roles effectively. There are a number of mining related laws and regulation that have been put in place to promote and regulate the extraction and marketing of various minerals in the country. The following is a summary of the various laws affecting the mining sector in Ghana. Some of these Legislations include:

- The 1992 Constitution, the Minerals and Mining Act, 2006 (Act 703)
- Minerals Commission Act, 1993 (Act 450)
- Precious Minerals Marketing Corporation Law, 1989 (PNDCL 219)
- State Gold Mining Corporation [Acquisition of Assets Amendment] Decree, 1968 (NLCD 218)
- Diamond Mining Industry Protection Regulations 1927, (No 9/1927)
- Mineral (Offshore) Regulations 1963, (L.I. 257)
- Mining Regulations 1970 (L.I. 665)

- Mineral (Royalties) Regulations 1987 (L.I. 1349)
- Kimberly Process Certification Act, 2003 (Act 652)

The main legislative framework for mining in Ghana is laid down in the constitution and the Minerals and Mining Act, 2006 (Act 703). Within this legal framework, the State is the owner of all minerals in Ghana. Article 257 (6) of the Constitution provides that every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the president on behalf of and in trust for the people of Ghana. Thus, regardless of who owns the land upon or under which minerals are situated, the exercise of any mineral right requires, by the law, a license to be granted by the Minister for mines who acts as an agent of the state for the exercise of powers relating to Minerals. Mineral rights are legally defined to include the right to do a preliminary inspection, prospect for, and mine minerals.

To have a body that regulates and manages the utilization of mineral resources in Ghana, the 1992 Constitution mandated parliament to establish a Minerals Commission six months after the coming into force of the constitution and this was done through the passage of the Minerals Commission Act, 1993 (Act 450). This Act, which came into force on 31st March 2006, revised and repealed many of the laws on mining in Ghana. It was passed to streamline Ghanaian law on mining to reflect new thinking, new developments and international best practices in the mining industry and to consolidate it with the enactment on small-scale gold mining.

An objective of the Act is to provide an internationally competitive framework that ensures a stable and equitable tax engine; of particular relevance to Corporate Social Responsibility (CSR), the object of the law is also to take cognizance of environmental protection as well as community interest with a view to providing a firm basis for the development and sustainability of mining in Ghana (Minerals Commission, 2004). However, these laws and ordinances were formulated as and when problems arose to ensure that the problems do not re-surface. Hence proper planning of sustainable resolutions was not done and recent conflicts are evidences.

2.3.4 History of Small Scale Mining in Ghana

Small scale mining in Ghana dates back to pre-colonial days and even continued secretly under ban through the colonial days to post-independence, becoming a serious economic activity in rural communities in the 1980s. From the 19th century, Ghana has witnessed three jungle gold booms. The first jungle boom targeted gold from Wassa and Asante with local and foreign investors establishing mines in these areas from 1874. The second jungle boom, which began in the late 1930s, saw an increase in gold export from 6 million pounds to 9 million in 1946-1950. The second jungle boom was also characterized with the colonial government banning private local gold miners and indigenous mining after 1933 from operating. This was also marked by the beginning of large-scale mining by British and other foreign investors. The resource that was once for the local people was reverted completely to other people. The colonial masters consolidated the takeover of indigenous properties with laws (World Bank, 2004). During the third jungle boom beginning from mid-1980s, Ghana's mineral sector had undergone massive changes based on the advice from World Bank and other development partners of Ghana.

The World Bank's role had further supported changes in law that allowed foreign mining companies to invest directly in Ghana giving a global direction of economic growth and investment. The change in direction was both political and economical where decisions on mining, which were a bit unclear, moved from local people to international level (World Bank, 2004). The Government of Ghana regularized the activities of small scale Miners in 1989 through the Small Scale Gold Mining Law. It is from this law that a definition of small scale mining in the Ghanaian context is obtained. The proliferation of illegal and informal small scale mining activities either on mining concessions or along alluvial deposits necessitated the promulgation of the small scale mining law. The Small Scale Mining Law (2004) defines small scale mining as the "mining of minerals by any method involving substantial expenditure by an individual or group of persons not exceeding nine in number or by a co-operative made up of ten or more persons". The objectives of the regularization of small scale mining are:

1. To provide employment in rural areas for those who could make a living out of the activity, and reduce rural-urban migration;
2. To absorb some of the workers who were being retrenched as a result of the Structural Adjustment Programme, being implemented at the time – particularly those affected by the downsizing of the state-owned mining companies.
3. To regulate activities of small scale miners to ensure that acceptable mining practices are employed with minimum damages to the environment;
4. To provide ready market for the minerals produced by small scale miners to ensure that receipts from the sub-sector is channeled into the mainstream economy thereby reducing the incidence of smuggling of precious minerals;
5. To stimulate rural capital formation.

The legalization also provided for the rationalization of the licensing arrangement that would provide small-scale miners direct legal access to the resource, technical and financial support and an official purchasing and marketing mechanism. The latter was achieved through the establishment of the Precious Minerals Marketing Corporation (PMMC) in 1989, which replaced the Diamond Marketing Corporation, then responsible for the purchase and sale of diamonds only (Minerals Commission, 2004).

Other regulatory provisions for the sector are the Mercury Law and Precious Mineral Marketing Law (PNDC Law 219) which widen the scope of the hitherto Diamond Marketing Corporation to include small scale gold marketing. In spite of this provision, the incidence of illegal mining, popularly called ‘galamsey’ still goes on.

2.3.5 The Operating Environment of Small Scale Mining

There are two categories of licensed small scale mining operators. These are:

1. Co-operative Ownership, and
2. Individual Ownership

In all cases of ownership, there are a number of people engaged to help carry out the various activities, for example digging, carrying, washing, panning, etc. The financier of the operation could be the owner or a Licensed Buying Agent (LBA), who may provide funds for equipment/implements and also feed the workers. Where the mineralization is ‘good’, there is always the influx of migrant workers, sometimes attracting foreign nationals even outside Ghana. The workers may be either on their own, paying prescribed fees to the owners in addition to “loans” collected, or be paid workers. In all these cases, there is always an understanding of who holds the authority at the site. The communities

are so much influenced by the small scale mining, sometimes to the extent of having been “hi-jacked” by these workers that they become unwelcome neighbours (Strongman, 1994).

Ashanti and Western regions are two southern regions very prominent in mining activities in Ghana. The two regions boast of both large scale mining activities and numerous small scale and informal mining scattered over the region. The largest mining company Anglo Gold Ashanti is located in Obuasi in Ashanti Region. The small scale and informal mining activities are either operated on portions of the concessions of large scale mining allocations, on designated mining areas or within alluvial deposits where minerals have been informally discovered. Alluvial gold and diamond deposits occur in stream gravel, river flats, old river terraces and beach gravel. Akabzaa (2001) reiterates that the activities of small scale miners are either legal or illegal. The illegal small scale miners, also known as the informal miners are commonly known as ‘galamsey’ operators.

2.3.6 Approaches Adopted to Discourage Illegal Mining in Ghana

One laudable argument (e.g. ILO, 1999 & Hilson, 2006) is that a poor understanding of target ASM populations has led to the design and implementation of inappropriate technologies and support services. This may explain why governments have generally failed to reduce the activities of illegal mining, too often viewing its participants as having similar backgrounds, skill levels, and educational training and demands. The three main approaches taken to combat the problem in Ghana have been formalization, military intervention and alternative livelihood projects.

Ghana legalized small-scale mining in 1989 when the government passed the ‘Small-Scale Gold Mining Law’, ‘Mercury Law’ and the ‘Precious Minerals and Marketing Corporation Law’. As Aryee et al. (2003) point out, the law now requires prospective small-scale

miners to secure licenses, which Ghanaian nationals aged 18 years or older are only eligible to obtain. To facilitate registration, the Minerals Commission has nine regional district centers, whose officers make an initial assessment of applications before forwarding them to Accra for a final decision.

However, in addition to few viable plots being available, as Hilson and Potter (2005) point out, there is often a lengthy waiting period for application decisions. The need to travel to the capital city to complete paperwork, and the requirement to make several payments, have further discouraged individuals from obtaining a license. It is safe to say that the government has done little to encourage legal ASM through the application of its legislation.

Government officers and officials at donor bodies often interpret failure on the part of artisanal miners to obtain a license as defiance and deliberate action taken to evade legislation. Often, the belief is that in order to attract foreign multinational mining companies, there must be a stable environment for investment, an image which illegal mining damages. This has motivated governments to demonstrate, proactively, to both existing and potential investors their commitment to addressing illegal activities, prompting calls to the military to ‘expel artisanal competition and local farmers or foresters by force’ (USAID, 2005, p. 4).

Military-led ‘sweeps’ of mining concessions have been common in sub-Saharan Africa. In Ghana, these sweeps require considerable financial backing and they are usually funded by mining companies. Although company officials typically deny it, these sweeps are often associated with human rights abuses. Perhaps because it derives revenue from the gold

collected from unlicensed mining operations, the Ghanaian Government only pressures companies periodically to finance security sweeps because it signifies to investors a commitment to removing illegal miners from company concessions. If public officials believe that these sweeps are effective, they may have little understanding of why the ASM sector is so deeply rooted. Despite the dangers associated with ASM, as well as the human rights abuses, artisanal miners generally return to the operations that they have been forced, typically at gunpoint, to abandon.

Finally, both the Ghanaian Government and several large-scale mining companies have launched a number of, mainly agrarian-based, alternative livelihood projects in an effort to reduce illegal mining and raise rural living standards. For example, AngloGold Ashanti has implemented a number of programmes in the communities of Adisakrom, Adieyie (Mile 8), Mile 7, Techiman, Nkwantakrom, Wangarakrom, Teberebie and Abompuniso.

These projects have sought to develop income-earning activities, including vegetable farming, snail cultivation and grass-cutter rearing (Carson et al., 2005), as well as provide assistance in account-keeping and conflict management, water management and environmental sanitation; and teacher training (AngloGold Ashanti, 2005). Ghana's other principal large-scale operators have launched similar programs (Gold Fields 2004; Newmont, 2005).

Although the efforts of large-scale mining companies to implement alternative livelihood projects have drawn praise from the Ghana Chamber of Mines and donor bodies, a recent study by Hilson and Banchirigah (2009) has it that these activities have done little to address the problems with which illegal mining come. Despite being promoted as

‘alternatives’ to artisanal mining, in many cases, it is the nearby local communities that are targeted in alternative livelihood programs, not the galamsey operators. The study also argues that there tends to be an expectation by government and company officials that all individuals will pursue alternative income-earning activities if they are available.

Several of the more vulnerable people found in ASM communities, including many women, children and the elderly (Hinton et al., 2003; Yakovleva, 2007), may abandon arduous mining activities if they have opportunities to farm or engage in other trades. But it seems unrealistic to assume that men who have been mining for much of their adult lives will abandon their work as galamsey operators in favour of vegetable farming or snail rearing.

The designers of most mining Alternative Livelihood Programmes in Ghana have overlooked two important issues. The first is earning potential: do the activities being promoted offer the equivalence or preferably, greater, incomes than those offered at galamsey camps? This is unlikely to be the case that when ‘compared to small-scale mining, alternative livelihoods such as farming often have lower and less immediate returns’(Carson et al., 2005: 41). Secondly, do programmes offer a multitude of opportunities reflective of the diverse tastes and skill levels of target populations? Galamsey camps are major employment engines, providing a wide range of jobs: general labour, driving positions, and even skilled posts such as bookkeeping and accounting. Despite also creating a significant number of jobs, a static livelihood programme based upon activities such as poultry rearing and cassava farming is unlikely to dissuade people from seeking employment at galamsey camps, where there are numerous options. Mining Alternative Livelihood programmes must therefore be equally dynamic, offering a range of

income-earning activities. It must be stated however, according to Hilson and Banchirigah (2008), that whilst it is unrealistic to assume that everyone will abandon artisanal mining if provided alternatives, many of the more vulnerable individuals, including women and the elderly, would abandon it if appropriate alternatives were made available.

In summary, despite having legalized ASM, engaging in military ‘sweeps’ in collaboration with the country’s large-scale miners, an assortment of alternative livelihood projects etc, it can still be argued that the Ghanaian Government has failed as far as the prevention of the expansion of illegal artisanal mining is concerned. In response to high gold prices, more sites are surfacing in areas without a history of ASM activities which included the Ntronang community in the Eastern Region.

2.3.7 Demographic Characteristics of Illegal Miners

2.3.7.1 Sex

It is usually believed that the gender perspective of the illegal mining business is male dominated. This is not always the case as Amutabi and Lutta-Mukhebi (2001) argue that there is a direct participation of women in artisanal mining at varied levels throughout the world. In Asia, generally less than 10% of miners are women, whereas in Latin America, the proportion tends to be higher, approximately 10-20%. The percentage of female artisanal miners is the highest in Africa, ranging between 40 and 50%. In some regions, the artisanal mining workforce is comprised of 60 to 100% women (ILO, 1999; Amutabi and Lutta-Mukhebi, 2001; Onuh, 2002). Women typically play a much larger role in artisanal mining than in the large scale mining sector (WMMF, 2000).

The involvement of women in Ghanaian small-scale mining has been well documented by Hilson (2001, 2002). According to him, acting as licensed buyers (6%), concession holders (10%), and work group sponsors or participants (15-20%), women comprise approximately 15% of the legal small-scale metal mining labour force in Ghana. Hilson (2001) estimates that illegal involvement in the *galamsey* industry is up to 50%. The involvement of women in industrial minerals (e.g. clay, stone quarries, salt) is much greater, with the proportion of women in salt mining as high as 75%. In the Tarkwa Mining Community, Akabzaa and Darimani (2001) observed women working in all aspects of mining, processing, and marketing. As is found in other countries, women predominantly participate in sieving, sorting, the transport of ore and water, and washing, although involvement differs depending on whether activities are legal and a cooperative is present. For example, in the Akoon mining cooperative, due to risks associated with underground mining, women are not directly engaged in mining but are employed as bookkeepers and security guards. At the illegal Cooase Camp, women pound rocks, carry ore and water for wages that are 60% lower than those of men involved in ore digging and washing.

Daily Guide (2014) postulates that eighteen illegal miners have been arrested in Obuasi for interfering in the concession of AngloGold Ashanti. Details of the news brings to light that all the eighteen (18) illegal miners who were arrested were males. Their names, as presented in the newspaper, are Akwasi Nyarko, Kwadwo Appiah, Kwadwo Antwi, Kwame Sowa, Gamel Abitonem, Richard Ofori, Kojo Ofori, Kojo Opoku, Bicalis Tulosong, Jonas Issaka, Kweku Frafra, Kofi Osei, Kwadwo Danso, Kwaku Afoakwa, Kwaku Fianin, Yaw Baah, Kofi Nii, Enoch Appiah and Kwadwo Anokye.

2.3.7.2 Educational Level

With regards to education, it must be stated that the educational level of illegal miners cannot be underestimated as far as their registration with the Minerals Commission is concerned. The findings, therefore, of a research conducted by Dwomoh and Owusu (2012) indicate that records from Kade Education Office in Ghana shows that the rate of school dropout in two towns (Kade and Apinamang) is on the high side. They give an instance in Akwatia (one of the towns in the district), out of a total of 88 students enrolled, only 42 were able to complete. The total percentage of school dropout was 52.27%. In terms of Apinamang which is also one of the towns in the Kwaebibirem district, the percentage dropout was 42.28%. According to them, some interviews they conducted with six (6) illegal miners who were among the dropouts from school gave their main reason as lack of support from family members to finance their education. They believe that with the illegal mining, it gives them all the money they need to start life. Looking at the responses of these illegal miners, the researchers were of the view that the dropout from school of illegal miners is due to the high premium they place on this illegal activity as compared to education. Talking about the attitude of the youth from 1980s up to present where illegal mining has become common among the youth in the districts selected for the study, it was revealed through the observations by Dwomoh and Owusu (2012) that the youth and for that matter school children attitude towards school changed when they get involved in illegal mining as they begin to get money from diamond and gold prospecting. It also came to light that after illegal mining, the youth tend to be truants preferring diamond and gold prospecting to school.

Another instance that was given by Dwomoh and Owusu (2012) indicate that a visit to one of the Junior High Schools in Ghana (Apinamang Junior High School) revealed that not

more than two-thirds of the enrolments have attended school even a single day since the beginning of the 2009/10 academic year.

2.3.7.3 Age

According to Hilson (2001), findings to his study at a mining site near Ntronang indicated that women who are engaged in the illegal mining business are aged between 17 and 50, but are mainly young women between 23 and 35 years of age. This is also confirmed in the findings of Dwomoh and Owusu, but this time both sexes, as they posit that majority of illegal miners are in their youthful ages.

According to Daily Guide (2014), eighteen (18) illegal miners have been arrested in Obuasi for interfering in the concession of AngloGold Ashanti. Details of the news brings to light that all the eighteen (18) illegal miners who were arrested were in their youthful ages. The ages that were represented among the illegal miners were between 18 and 34 years.

2.4 FACTORS AFFECTING REGISTRATION OF ILLEGAL MINERS

2.4.1 Political Factors

Jennings (1998) argues that small-scale mining is bedeviled with too many regulations that are mostly designed to constrain it and too few inspectors to ensure that they do. When regularizing informal sector operations, ‘the issue is not one of regulation per se but of the form of regulation’ (Roberts, 1994: 8). Lagos (1995) describes how inappropriate regulations can impede the formalization of such operations. Supporters of the illegality-approach argue that the institutional and legal framework constitutes an obstacle to the

formalization of the informal sector. They maintain that the formalization or legalization of micro-enterprises is virtually impossible because of government interventions through disproportionate regulation and bureaucracy which are not only excessively time-consuming, but also impose high financial costs.

Suttill (1995) has it that in the case of artisanal mining, despite the efforts made by a number of governments in recent years to implement appropriate regulations and simplified registration systems for operators in the majority of cases, the process of securing a license to mine on a small scale is associated with excessive paperwork, costly procedures, and lengthy waiting periods. Maldonado (1995) posits that the expenses and delays in registering operations, combined with the complexity of administrative procedures and the inappropriateness of regulations, have long deterred micro-entrepreneurs from legalizing their enterprises. Thus, if small-scale miners are to be encouraged to operate legally, legislation must be, at least, even-handed in allowing small-scale miners access to suitable land for prospecting and mining activities and must be “user friendly” as far as the issuing of permits and the granting of licenses are concerned i.e. permits that provide clear security of tenure for a reasonable period so that small-scale mining can be established (Jennings, 1998).

Despite benefiting substantially from the output derived from resident artisanal and small-scale gold mining activity, the Ghanaian government appears to be further ostracizing its participants by repeatedly implying that their unregistered operations are in breach of legislation. In accordance with the Small-Scale Gold Mining Law, a prospective operator is required to register a concession with the authorities prior to engaging in any mining activity. However, the lengthy delays and bureaucratic procedures associated with securing

a small-scale mining license are bound to be problematic to the subsistence operator, who relies on a daily wage to purchase, amongst other things, supplies of food, water and clothing. In short, whilst the policies of the SAP have established an enabling operating environment for large-scale mining companies, they have created exceptionally difficult operating conditions for artisanal gold miners.

Aryee et. al (2003) provide a detailed overview of this licensing procedure, which begins with prospective licensees, who must be Ghanaian nationals aged eighteen years or older, submitting ten copies of a completed small- scale mining application form along with accompanying site plans of the proposed mining area, to a local small-scale mining district centre. An inspection report is then forwarded to the District Chief Executive of the relevant political district. Following the issuance of an environmental permit from the Environmental Protection Agency (EPA) and payment of the required fees, the application is forwarded to the Minister of Mines for assessment. If approved, an agreement is forged between the applicant and the Government of Ghana, after which the signed documentation is taken to the Chief Inspectorate of Mines, who awards the official license to work on the allocated parcel of land. Licenses are subject to renewal after three to five years, depending on the concession size. The insertion of what many feel is an unnecessary Environmental Impact Assessment stage by the EPA has significantly delayed the process of issuing licenses.

GNA, (2013) brings to the fore an interview by Hon Bossman Shiaman Jnr, that was granted to Okay FM where he is reported to have disclosed that the security personnel have completely swayed away from their line of duty and care only about making “loads” of cash from illegal mining activities. According to the GNA, (2013) he is reported to have

indicated that policemen in his area had totally saturated the respect of the police service bestows on them and established questionable relationship with the illegal miners. He is reported to have disclosed that the integrity of the police service has been tattered and galamsey operations have rather been booming in his district, Upper Denkyira East particularly in Dunkwa-On-Offin.

Far apart from the above highlighted issues, GNA (2013) brought to light that government officials has some interesting roles to play in the illegal mining activities. The source indicated that the Member of Parliament for Kwadaso, Dr. Owusu Afriyie Akoto alleged that Ministers of states and some DCEs were neck deep in galamsey operations in the country and is therefore proposing that ministers of state and DCEs ought to be investigated before they are entrusted with any responsibility to deal with the activities of illegal miners. He is reported to have gone ahead to state that the age long problem cannot be conquered unless top officials in positions of influenced are fished out and made to stop meddling in the illegal mining activities. To add to the above, it is evidently clear of the involvement of government officials when GNA (2013) issued a report that the DCE of the Upper Denkyira East District has been arrested for engaging himself in illegal mining operations.

Hilson (2002) postulates that since the launch of the SAP, the Ghanaian government has tended to favour the awarding of land concessions to large-scale mining and mineral exploration companies, making it even more challenging for artisans to legally secure productive land. A great majority of the plots awarded to mining companies to date are exceedingly large, and although vast portions often go unused and are even unsuitable for mechanized mining activity, they have proven difficult to extract from these companies for

redistribution. Yakubu (2002) argues that exploration and mining lease concessions stretch for several square kilometers without a break, thereby encompassing many towns and villages and as such residents of these areas do not have access to land to acquire legally for small scale mining' which therefore gives rise to conflicts.

Conflicts amongst community or family members over land ownership is a major problem in many traditional societies in Ghana where land is the major form of asset for livelihoods of many rural, predominantly poor people (Quissumbing et al., 2001) Onset of ASM activity in a given area was, therefore expected to exacerbate the problem.

Firstly, the problematic nature of the concessions regime in the country's mining industry has encouraged conflicts between the natives of the mining areas and the mining companies or galamsey practitioners. The procurement of concessions confers on the expatriate mining companies' immense entitlements, rights, powers and controls much to the detriment of the communities that host them. Once a company obtained a concession, all occupiers of land within the frontiers of the lease, held tenancies at their will and nobody could undertake any economic activity on the lease without the sanction of the mining company (Addo-Fening, 1997). Section 24 of the Concessions Ordinance (1900) outlawed any person from searching for minerals without a prospecting license, while Section 34 (1) limited potential African mining entrepreneurs to the use of local technology (Addo-Fening, 1997). This attempted to prevent the indigenous people or the local miners from the mining industry which had been their main occupation up to the 1880s, and turned it into the exclusive preserve of European capitalists.

Meanwhile, the Concessions Ordinance (1900) paid no attention to the fact that a majority of rural peoples on whose lands these concessions are given are either subsistence farmers or small-scale miners. Conflicts usually occur in these communities when the extraction of minerals is not handled in a sustainable, eco-friendly manner leading to a consequent loss of livelihood, extensive damage to the environment and an inequitable distribution of benefits (WECD, 1987; MMSD, 2002b).

This situation deprives the locals of vast fertile lands for agriculture which was and indeed, still is their main source of livelihood. It must be noted that most of these concession lands are to be found in the densely forested and therefore highly fertile areas of the communities that upon their purchase, the people are rendered virtually redundant because their only source of agriculture in most cases are robbed from them. There have therefore been recorded cases where the grievances of these host communities have resulted in bloody confrontations between themselves and the companies. For instance in June 2005, according to Agbesinyale, (2003), more than 500 people from Prestea, Himan, Bondaye and other communities surrounding Bogoso poured on to the streets of Prestea to demonstrate against surface mining by the Bogoso Gold Limited (BGL). Some of the demonstrators attempted to enter a nearby pit that security officers were guarding. The security men fired warning shots and tear gas, wounding seven of the demonstrators (Agbesinyale, 2003).

At this point it would be necessary to state that the nature of mining activities in the country during the post-colonial period was not and has still not differed any much from the regime under the colonial period in the sense that the large mechanised mining companies were owned by expatriate multinationals and Africans as of old were relegated

to the fringes and only participated as unskilled labourers in the pay of the companies. Nonetheless, some daring Africans who acquired mining skills from their elders managed to gain employment with the western mining firms where they again learned some scientific methods of extracting minerals like gold, through the use of chemicals like mercury and cyanide. In the course of time when the companies laid them off, these people combined traditional mining techniques with modern ones to extract minerals. The new amalgamated system that combined these two technologies is locally referred to as galamsey (artisanal small scale mining) which is similar to the practice of ‘garimpeiros’ in Brazil. (Agbesinyale, 2003) These galamsey operations are usually referred to in academic circles as “Artisanal Small-Scale Miners” or ASM.

It is a general truth that, before large-scale mechanized mines acquired concessions, indigenous artisanal and small-scale miners would have already been working on the land. These people, who obtain their livelihood through their small-scale mining operations, are the uncelebrated pioneers to many applying the use of local techniques and procedures to identify profitable economic mineral reserves. Hence, the local miners are left with the sore feeling of injustice and anger when they are ejected from their gold fields only for the same land to be leased to foreign mining firms that have the capacity to embark on mechanised exploitation of minerals. In numerous cases, some aggrieved galamsey miners disregard the warnings of trespass and proceed to mine on the concessions of some registered companies thereby leading to conflicts.

Moreover, with limited personnel strength in the country’s police force, these mining companies are left to devise their own means of ensuring the security of their property. These “private” security personnel are mostly poorly trained and therefore very

unprofessional in their attitudes and approach towards their work and sometimes their rush and unethical response to emergencies causes rather simple situations to degenerate into complex conflicts. This state of affairs coupled with foul and disheartening rhetoric by the expatriate concessionaires go a long way to create tensions and confrontations in the affected host communities. The analysis above therefore validates the observation of Hilson, (2004) when he posited that poor communication has been an important initiator of conflicts. Thus, in an attempt to curb the rampant stealing of ores from its concession, AngloGold-Ashanti was reported to have threatened to shoot on sight any artisanal/small-scale miner who entered the company's concession (Akabzaa et. al., 2007).

2.4.2 Economic Factors

Raimi (2013) contended that before committing investible funds to any business activity, there is the need to understand the business environment. The term business environment is composed of two words 'Business' and 'Environment' (Raimi, 2013). The word business in its pure economic sense refers to all lawful human activities ranging from extraction of raw material, production of tangible products, distribution of goods and rendering of services for the purpose of earning profits. On the other hand, the word 'environment' refers to the physical surroundings where human beings live and operate business activities (Raimi, 2013). In line with this, mining activities are equated to business while that of economic factors forms part of the environment.

In addition to this, Jenson (2013) posited that "Cash is King". According to Jenson, a healthy profit may look nice on your financial statements, but if capital expenditures or receivable collections are draining your cash, you won't be able to stay in business for long. Too often executives and small business owners fail to focus enough on cash flow

generation. In order to head off this problem, businesses must either be adequately capitalized and must shore up cash reserves to meet all obligations as they are needed and to handle downturns and emergencies that may arise. Cash management becomes even more important during recessionary times when cash is flowing more slowly into the business and creditors are less lenient in extending time to pay. For small businesses, handling business accounting and taxes may be within the capabilities of the business owners, but professional help is usually a good idea. The complexity of a business' books goes up with each client and employee. Jenson further stated that cash flow challenges are exacerbated by the lending climate, particularly for small businesses. This, inevitably, becomes a major problem when it comes to capital to legalize operations.

2.4.3 Socio-Cultural Factors

2.4.3.1 Culture and Illegal Mining

A second reason why artisanal mining is often deeply rooted is its link to influential traditional leaders. In Ghana, chiefs play important roles in the mining industry, overseeing compensation processes and spearheading negotiations concerning land transfers to companies. Perhaps even more importantly, despite mineral rights being vested in the presidency and chiefs playing no role in the approval of a mining concession, rural inhabitants see them as figures of authority. Thus, in areas that are relatively 'un-policed', chiefs stand to benefit financially from prospective miners by endorsing their illegal activities in exchange for a fee after which the artisanal miners are granted permission to operate. With the demise of GCD, however, customary land owners began not only to trespass, but also to trade mineral-rich (mainly company) lands to artisanal miners. Many chiefs also partnered with the mainly illegal artisanal miners (known locally as 'galamsey' miners) to work on the company-acquired lands for gold. Stephen Piedu, as reported by

Afenyi Dadzie (2012) has argued that one of the surest ways to deal with the canker of illegal mining is to prosecute and jail chiefs who involve themselves in the illegal activities. According to Dadzie (2012), Mr. Piedu, who is a Chief Inspector at the Minerals Commission, inherently acknowledges the roles of the chiefs in the involvement of artisanal mining which has implications for which alternative income ventures are likely to succeed. In a larger context, therefore, their ‘participation’ in illegal mining makes it ‘acceptable’ in the communities.

GNA (2013) in an interview with Kofi Boateng, an illegal miner, has revealed that the current drive to flush out galamsey operators would yield no positive results if the root factors are not critically assessed. He is reported to have indicated that the arrest and prosecution of individuals engaged in illegal mining should not exempt traditional rulers who directly benefit from such activities. The same source reveals that Kofi Boateng said this at a public forum by saying, “They should go to the chiefs who personally sold the land to individuals...and even some of the chiefs go ahead and take money from these people and tell them that they will reclaim the land which they don’t. I have never heard the arrest of even one single chief on the issue of illegal mining.”

In furtherance of this, the Okyehene, Osagyefo Amoatia Ofori Panyin, according to the GNA (2013) is reported to have called for the arrest and prosecution of any chief found culpable of masterminding any illegal mining activity in the country. He is quoted to have said this, “Any chief who is aware that it is illegal to do galamsey and still gives out land for such purposes must be arrested. This shows an inherent admission of the fact that chiefs are noted for giving out lands for these kinds of activities. GNA (2013) goes on to

cite the MCE in the Upper Denkyira, Mr. Owusu Ashia advising cocoa farmers and chiefs in the area to desist from selling lands to illegal miners.

Again, apart from the role played by some of the traditional leaders, the illegal miners have their own reasons. Hilson (2001), argues that the illegal miners have a difficulty in registering because of cultural relationships they have with the land, known as ancestral ties, a significant number of illegal miners have been reluctant to register, which in turn has resulted in a number of disputes over mineral rich land concessions. The lands in the area that bear gold, as is the case in many parts of Ghana, are predominantly 'owned' (i.e., held in a custodial sense by traditional authorities such as chieftaincies) in the customary form of stools, skins, and families, despite the fact that the country's Minerals and Mining Act (2006) allocates ownership of all minerals located on such lands to the state (Nyame and Blocher, 2010). When GCD was actively operational, customary land owners whose lands fell within the company's concessions could cultivate such lands for food crops provided, of course, that they had prior permission from the company's management.

2.4.3.2 Environmental Education and Illegal Mining

The major thing that deals with permanent change of behaviour is education. This is evidently made clear when Oduro-Mensah (2004) posits that education is the process of enhancing the development of certain knowledge, skills and attitudes in an individual to enable him or her become better identified with his or her community aspirations and contribute successfully towards the community's common goal, which is development. It is therefore assumed that when real Environmental Education is given to the target group (illegal miners), there will be a permanent change in behaviour.

In addition to the review, Allers (1997) described environmental education as “about, for, in and through the environment”. It is also a process that seeks to develop the necessary awareness, ethics, values, knowledge, skills, and commitment to allow people to become environmentally literate in order to be pro-active in securing a proper functioning and healthy environment that is sustainable. To elaborate on the concept of “environment” one can follow the description in Van Rooyen and Viljoen’s article in the Environmental Education curriculum guide (2003) which indicates that our environment is our world and that the environment comprises of the natural environment (which includes sun, air, water, earth, physical cycles that supports life), the social environment (which includes humans and the human-created world of buildings, farms, machines, governments, economies, religions and cultures); and the personal environment (which includes the way a person thinks, feels). According to Hawkins (1994) in the Oxford School Dictionary, the concept ‘education’ implies a process of training people’s minds and abilities so that they acquire knowledge and develop skills. Therefore, Environmental Education can be described as a method of promoting effective learning and teaching, and helping learners to become aware; to acquire the understanding, skills and values that will enable them to participate as active and informed members in the development and maintenance of an ecologically sustainable society.

Engleson & Yockers (1992) describes the aim of environmental education as a way to help individuals become aware, skilled, knowledgeable, dedicated citizens, who are committed to work, defend, improve, and sustain the quality of the environment on behalf of present and future generations of all living organisms. Van Rooyen & Viljoen (2003) summarizes the aim of Environmental Education by arguing that in order to foster universal environmental ethics in which citizens unite in a common cause according to the slogan

‘Think globally, act locally’ in the interest of sustainability. In essence the aim of Environmental Education is to focus on developing a citizen that is informed, aware, has skills and the correct attitudes and values that are needed to maintain a dynamic equilibrium between quality of life and the environment. There are different objectives of Environmental Education that is necessary towards achieving its aims. Environmental Education has five objectives which are perceptual awareness, knowledge, environmental ethic, citizen action skills and citizen action experience. The perceptual awareness objective encompasses receiving, responding, and feelings, thoughts, distinguishing senses, and developing skills in measuring, observing, predicting, interpreting, and analyzing. The knowledge objective encompasses environmental experiences, the use of the senses, concrete and abstract learning, the age of the learner, and the degree of sophistication of subject matter. Environmental ethic focuses on learning the right and wrong doings, and self- imposed moral codes such as values, attitudes, and beliefs. The citizen action skill and citizen action experience focus more on the responsibility that citizens have towards the environment. Allers (1997) advocates that citizens must be trained and have the skills and experience for them to manage the environment effectively.

According to Van Rooyen & Viljoen (2003), Environmental Education involves a learner-centered approach. It allows learners to play a role in planning their own learning experiences. Learners acquire knowledge, skills and values so that they become aware of any problems that they may encounter in their environment. Effective environmental education has to ensure that learners understand the teaching and learning that have taken place. They must be able to analyze environmental issues in their environment based on the knowledge acquired. They have to be able to conduct investigations and have a sense of responsibility towards their environment. The outcome of Environmental Education is

to see to it that learners are able to observe, gather data, measure, analyze, synthesize, investigate, diagnose, be disciplined, and are able to make decisions that are effective. Van Rooyen & Viljoen (2003) argue that Environmental Education should prepare individuals to be able to address problems in their environment in a sustainable manner.

2.4.3.2.1 Environmental Literacy

Allers (1997) described environmental literacy as the capacity to receive and interpret the relative health of environmental systems and to take appropriate decisions and actions to restore, maintain and improve the health of those systems. Moreover, he describes an environmental literate person as someone with an awareness of sensitivity to the total environment, the capacity to move from environmental awareness to knowledge and action, a set of values and feelings of concern for the environment, the motivation for actively participating in environmental improvement and protection; skills for identifying and solving environmental problems.

Van Rooyen & Viljoen (2003) indicate that environmental literacy is educating the population to view and use the environment in a responsible manner and to behave in such a way that will help us leave the environment the same and even of better quality to our children. In essence, environmental literacy should promote awareness. Environmental literacy has three levels namely, nominal, functional, and operational. The three levels of literacy emphasize the importance of knowledge, feelings, attitudes, values, skills, and behaviour. Nominal environmental literacy indicates the ability of the learners to recognize many of the basic terms used in communicating about the environment and to provide rough, if unsophisticated, working definitions of their meanings. Functional environmental literacy also indicates a broader knowledge and understanding of the nature

and interactions between human social systems and other natural systems while the operational form of environmental literacy relates to progress beyond functional literacy in both the breadth and depth of understandings and skills.

Persons at the operational level routinely evaluate the impacts and consequences of actions, gather and synthesize pertinent information, choose among alternatives, advocate action positions, and take actions that work to sustain or enhance a healthy environment. Such people demonstrate a strong, ongoing sense of investment in and responsibility for preventing or remediating environmental degradation both personally and collectively. Ultimate goal of the environmental literacy is to create social structure where operational level of environmental literacy spread through all walks of life. It depends on various components (awareness, knowledge, attitudes and action) of environmental literacy and effective acceptance.

2.4.4 The Role of Non-Participation in Policy Formulation

2.4.4.1 Concept of Participation

The concept of participation tends to confuse many scholars of development studies. In defining participation, Kohssay and Oakley (1995) define participation as collaboration, in which people voluntarily, or because of some persuasion or incentives, agree to collaborate with an externally determined development project, often by contributing their labour and resources in return for some expected benefits. World Bank (1996) defines participation as a process through which stakeholders' influence and share control over development initiatives and decisions and resources which affect them.

The term 'participation' can be used in many different ways and is often used interchangeably with words such as involvement, engagement or prefixed with civil, community or public (Brodie et al 2009). There are three broad categories of community participation:-

- Individual – signing petitions, boycotting products (Brodie et al., 2009), neighbourliness, 'doing a favour' (Williams, 2011)
- Community or social participation – being a member of a community group, association, club, volunteering, running a church group (Brodie et al., 2009)
- Public participation – this can also be referred to as political or civic and includes voting in elections, taking part in consultations or being a local councillor (Brodie et al., 2009).

According to Williams (2005), he defines community as any activity which involves spending time, unpaid, doing something which aims to benefit someone (individuals or groups) other than close relatives, or to benefit the environment

This definition covers all three of the categories; individual, social and public and it should be noted that many people participate at all three levels over the course of their lives (Brodie et al., 2011).

Therefore, based on all these definitions of participation, one can realize that both definitions see participation as an important instrument of empowering people in the developmental process. In a simple way, participation gives power to the people. However, for the participation to be meaningful, the action must be voluntary and not forced by an external party. In order for the people to participate effectively, education and awareness cannot be ruled out as very essential variables in the influence of community participation.

The scholars/practitioners of development interpret the concept of participation in two broad and distinct areas of development. According to Bagumhe (2007), participation can be considered as the means as well as the end by itself. The distinctions between these are neither clear cut nor mutually exclusive, but they do represent two different purposes and approaches to promote participatory development. Participation as a means simply see participation as the process whereby local people cooperate or collaborate with the externally introduced development, collaborates in accomplishing development project. In this way, participation becomes the means through which the initiatives are implemented more effectively. The government or donors are the ones who initiate development processes and use community resource to provide service to the people.

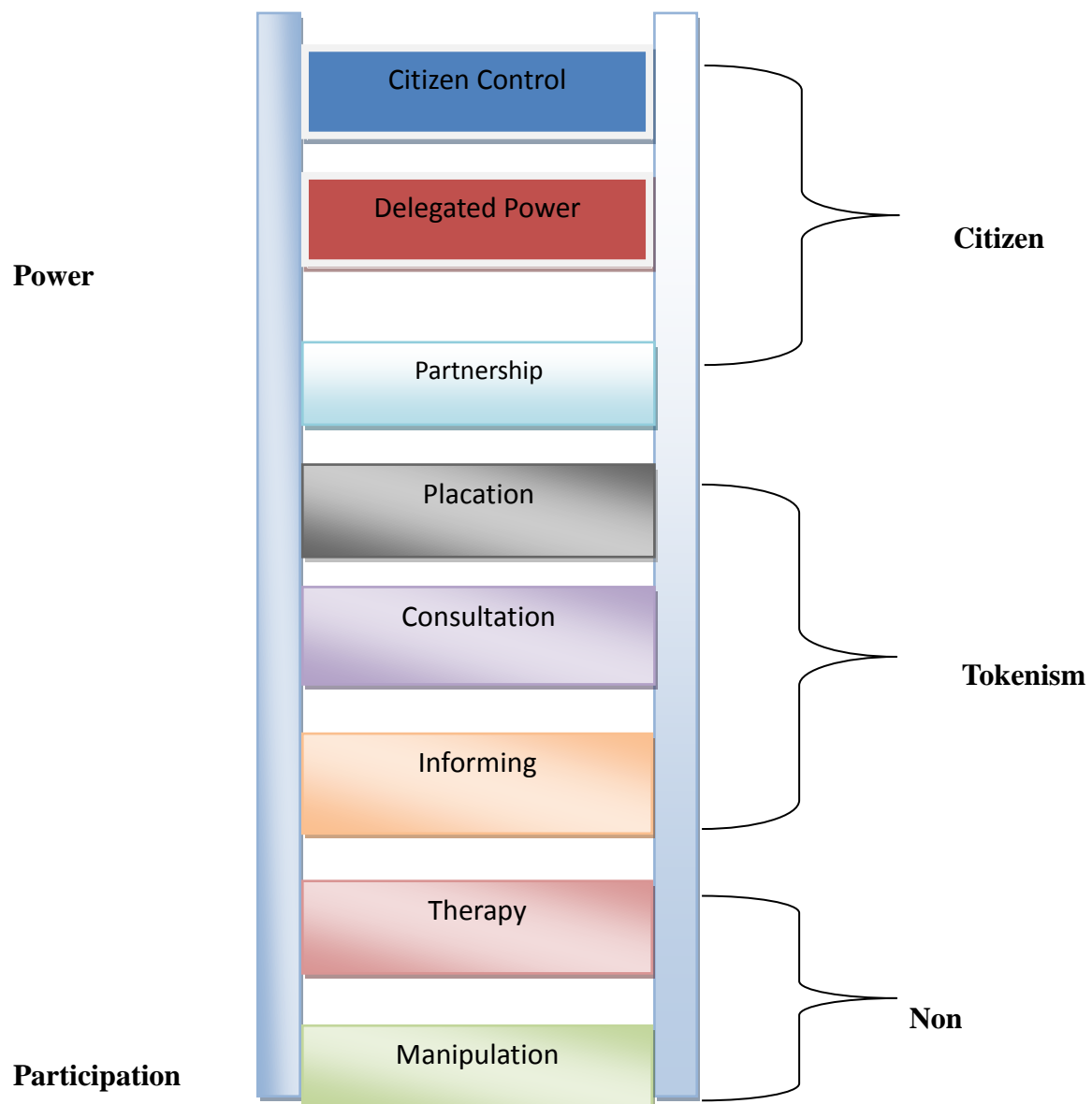
Participation as an end is regarding participation as a goal in itself. This goal is expressed as the empowerment of people in terms of their skills acquisition, knowledge and experience to take greater responsibility for their development. The concept of participation as an end is aimed at ensuring that people are responsible in solving their own socio-economic problems. Nelson and Wright (1995) describe 'participation as an end' in a situation where the community or group sets up a process to control its own development. There are still hot debates among practitioners and in the literature about whether participation is a means or an end or both.

It must be stated that participation is important as communities with high levels of participation have greater trust, lower crime levels, better health and they vote more often (Porritt, 2007). It has been suggested that people are choosing to disengage from public participation because they feel there are more effective ways to make a difference in their communities (Ockenden, 2007). It is interesting to note that 37% of people who claimed

they did not vote in elections were members of ,or active in, a community group, a charity, a campaigning organisation or a public body (Power Inquiry, 2006).

2.4.4.2 Arnstein's Ladder of Participation

An early example of a participation ladder is provided by Sherry Arnstein in her classic article 'A Ladder of Citizen Participation' (Arnstein, 1967). For Arnstein, "citizen participation" is a categorical term for citizen power. The most essential aspect of participation is the redistribution of power, without it participation is merely "an empty and frustrating process for the powerless" (Arnstein 1967:2). Participation is therefore described as a process of power redistribution aiming to enable the formerly powerless people ("have - nots") to take substantial part in political and economic processes (Arnstein, 1967). Arnstein's ladder is made up of eight rungs, each of them corresponding to the extent of power that the citizens have to influence and realize social, political and economic outcomes. The single rungs are (from below) manipulation, therapy, informing, consultation, placation, partnership, delegated power, and citizen control (Arnstein 1967: 2). The rungs describe three different forms of participation. These are (from below) non - participation, tokenism, and citizen power.

Figure 2.4.4..2 Arnstein's Ladder of Participation

Source: *Sherry Arnstein's (1967) article 'A Ladder of Citizen Participation'*

According to Arnstein, “real” participation only starts taking place at the level of “partnership”. At this stage citizens gain power and are enabled to actually take some kind of influence in the process. “Partnership” is the outcome of a negotiation process between “citizens” and “power holders” that entails the re-distribution of power and an agreement among the partners to share planning and decision-making responsibilities (Arnstein,

1967). The next two rungs, “delegated power” and “citizen control” describe the move from having genuine part in the decision-making.

The three levels of participation under the headline “tokenism” describe a process of information sharing, in which the “uppers” inform the “lowers”, and the latter are able to inform the “uppers” (“consultation”). However, the lack of power, redistribution, leaves the powerless without any ability to ensure that their views and aspirations have any influence on the process and its outcome. Arnstein argues that when participation is restricted to these levels, there is no follow through, no muscle, “ hence no assurance of changing the status quo” (Arnstein 1967: 2).

Of special relevance for the case of this study is that Arnstein’s typology includes forms of “non-participation” which yet appears in disguise of participatory practices. These types of participation, described on the ladder as “manipulation” and “therapy”, enable the “power holders” to remain in total control and determine the outcomes of a given process, while at the same time maintaining an appearance of legitimacy and moral authority by referring to the participation of the people in the process. Indeed manipulative is such a process in the sense that it attempts to give the so-called “participants” the illusion that they have a say in the decision making process (Arnstein, 1967). Manipulative forms of participation often make use of committees, advisory groups, and councils which have no legitimate function or power. Such bodies are used to legitimize pre-determined decisions by the “power holders”. Through “education” and “persuasion”, for example via selective provision of information or by exploitation of people’s unawareness, “power holders” may “engineer” people’s support for decisions and projects which actually run against the citizen’s

interests. By referring to attendance in committees and signature lists the “power holder” displays a “participatory” process and legitimizes his actions.

As Arnstein puts it, “manipulation”, the lowest rung on his ladder “signifies the distortion of participation into a public relations vehicle by power holders” (Arnstein 1967: 4). The second lowest rung labeled “therapy” refers to participation as a mask for “group therapies” and is grounded in a discriminatory assumption that powerlessness and poverty is rooted in the individual himself, in the form of mental illness or some other pathologic characteristic. While engaging “participants” in “extensive activities” under the pretense of involving them in some planning or decision making process, the administrators of such practices aim to “cure” the “participants” from their “pathology” (Arnstein 1967: 5). As a common example for this form of participation, Arnstein refers to public housing programs where tenant groups are used as vehicles for promoting control or cleanup campaigns. The reasoning behind the establishment of these groups, however, is to divert the tenants from dealing with issues that might trigger unrest or protest, such as arbitrary evictions, segregation of the housing project, or the existence of bureaucratic hindrances that are of disadvantage for the tenants (Arnstein 1962: 5).

The idea of suppressing (legitimate) protest and the awareness of injustice contained in this level of Arnstein’s ladder calls to mind the insinuated intention underlying the practice of community participation in the 1950s and 1960s of containing and defusing civil unrest. An example of participation as a public relations vehicle can be seen in the use of participatory practices in development projects of the 1980s.

The dimension of manipulation within the concept of participation as a critical concern has been dealt with especially by commentators affiliated to the post-development school. Rahnema (1997) argues that in the context of the already manipulative mainstream, development being mainly concerned with modernization and economic development, “participation is easily transformed into manipulative designs totally opposed to what the people want it for” (Rahnema 1997: 158). Within these manipulated, or “teleguided” forms of participation, “the participants do not feel they are being forced into doing something, but are actually led to take actions which are inspired or directed by centres outside their control” (Rahnema 1997: 156). Kapoor (2005) sees the manipulative character of participation inter alia in its tendency to appear open and transparent while obscuring the “real” distribution of power which remains in favour of the development facilitator. He argues that the ostensible renouncement of power (“handing over the stick”) in participatory community practices, such as PRA, by the development practitioner has the effect of increasing his or her power. Kapoor (2005) asserts that, pretending to step down from power and privilege is reinforcement, not a diminishment, of such power and privilege.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The population, sample and sampling technique, research design to be adopted for the study as well as the instruments that were used are captured in this section. It also includes the procedure for data collection and data analysis of the study.

3.2 Population

All small scale mining operators located within the Upper Denkyira East District who have not registered with the Minerals Commission constituted the target population of the study. The accessible population was all illegal miners in two towns within the District. This geographical location was selected because according to the Minerals commission (2013), the massive small scale mining that goes on there can really contribute to high revenues in Ghana if they are all registered. This, in effect, would obviously result in a reduction of the hazards that environmental degradation brings. Due to the illegality of the activities of these illegal miners, it must be stated, there was an inherent difficulty of having a list of all illegal mining operators in the district from which a particular number or sample was to be selected.

3.3 Sample and Sampling Procedures

There are nineteen (19) towns in the Upper Denkyira East District out of which two (2) were selected. The two (2) towns that were selected were Kyekyewere and Dunkwa-On-Offin. Only two (2) towns were selected because all the towns in the district are homogenous in nature as far as illegal mining activities in the Upper Denkyira East District is concerned. These two (2) towns were selected by employing the purposive and

convenient sampling technique. Purposive and convenient sampling was adopted because in as much as all the towns in the district are homogenous with respect to illegal mining, the intensity of the illegal mining activities in all the towns will definitely be in various degrees. For this reason, convenient or purposive sampling aided the researcher to select these two (2) towns where the intensity of these illegal mining activities was high.

After the selection of the two towns that were understudied, the researcher through the adoption of the purposive sampling technique selected eleven (11) respondents from Dunkwa-on-Offin to go through the one on one interview. After conducting the one on one interview, one focus group discussion was organized. This was made up of eleven (11) respondents. The researcher went through the same process for Kyekyewere. The researcher again interviewed five (5) of the bosses of some identified pits. The five bosses were purposively selected for the study. Also, two officials of the Minerals Commission including an official each from the District Assembly, Environmental Protection Agency (EPA) and the Lands Commission were purposely selected in addition to the already mentioned respondents. This was to triangulate the responses from those engaged in activities as well as those in charge of registration of mining activities in Ghana.

3.4 Research Design

The research design used for this study was explorative case study. This design was adopted mainly because of the in-depth nature of the study, usually in an unexplored field, in the quest of bringing to light factors that are unknown. (Mills et al., 2010)

It was used because the study primarily sought to explore and find out the factors that inhibit illegal miners from registering with the Minerals Commission in the two selected

communities in the Upper Denkyira East District in the Central Region. The case study design was chosen because it made the researcher to have an in-depth study to be able to explore and bring out the factors that inhibit the illegal miners from registering.

3.5 Research Instruments

Two primary instruments were used to collect the data. These instruments were structured interview schedules and Focus Group Discussions. These two instruments were used to ensure that most of the respondents, who were semi-literate or illiterates, did not have difficulties responding to the questions that were asked. This is so because the interviews and focus group discussions gave the respondents liberty to respond to the questions or make contributions in their local dialects which rendered the information that was collected rich.

Mention has to be made of the fact that, inasmuch as the use of focus group discussions have its own disadvantages, the advantages far outnumber the disadvantages for which reason it was used. Some of its advantages are that, it is relatively easy to undertake and that a large number of people can be interviewed at the same time which minimizes the time involved and the cost involved and many others. One major disadvantage of the Focus Group Discussions for which reason one cannot solely rely on is the fact that some members of the group will, in one way or the other, be forced to share the same thoughts as have been expressed by a colleague in the group whereas probably the person might have a different view which he wishes to express. The use, therefore, of the one-on-one interview was to seek the real contribution of individual respondents devoid of the influence of other people's contribution or thoughts. In this light, it must be stated that, it is because of the disadvantages of the focus group discussion that the one-on-one interview

was also used in other to complement each other. The interview schedule was deemed appropriate due to the fact that not all the illegal miners could read or write. Based on that, 85 percent of the illegal miners preferred interview to questionnaire. This was discovered after the pretest.

King (2004) posits that interview schedule is the most appropriate instrument of data collection qualitatively and as such gives in-depth understanding of the subject matter being studied. The interview schedule was conducted by the researcher himself so as to get in-depth understanding of the phenomena being studied. Furthermore, it ensured adequate record of data.

The interview schedules were broken down into four major sections and it consisted of both open ended and closed ended questions. Section A was titled “Demographic Characteristics.” The breakdown of this section sought to find out from the respondents whether or not there was any relationship between some selected variables and their unregistered activities. Section B also had the title “Administrative/Political Factors”. Section C and Section D had the titles “Economic Factors” and “Socio-Cultural Factors” while Section D had the title “Non-Participation in Policy Formulation”. Questions were therefore asked to elicit the information from the respondents in that regard.

3.6 Reliability and Validity

To ensure reliability of the instruments, the test-retest method was employed. The pre-testing was conducted in the Kwaebibirem District in the Eastern Region, specifically in Akwatia, which has similar occupational features. The town was identified by the researcher as having similar characteristics to the Upper Denkyira East District. After the pre-testing, a second set was administered to the same respondents after an interval of two

weeks with the same interview schedule having a different numbering scheme. After the re-test, some of the questions were modified and the interview schedule saw the additions and deletions of some questions. The respondents had the questions in a logical sequence and the interview schedule was made as short as possible. After all the needed inputs were made in the instruments, they were ready for administration in the next stage of the research. The test was considered reliable when essentially the results showed consistency in the instruments because very similar responses were given. This form of reliability was established through the use of a simple correlation coefficient analysis.

Additionally, the researcher ensured reliability of the research instruments by avoiding double barreled items which could have distracted the respondents from providing the appropriate responses to items. As much as possible the researcher, again, avoided the use of leading questions which could also distract the instrument from measuring what is intended.

The validity of the research instruments were also ensured by employing multiple data collection instruments thereby ensuring truth in the data collection tools.

3.7 Fieldwork and Administration of Research Instruments

The researcher was given an introductory letter from the Institute of Continuing and Distance Education which sought to play the role of bringing to light the identity of the researcher. After the reception of the letter, the researcher visited the Minerals Commission Head Office in Accra where a senior official linked him to the Minerals Commission official in the Upper Denkyira East District who was stationed at Dunkwa-On-Offin. The researcher, on the proposed day, travelled to Dunkwa-On-Offin and headed

to the Minerals Commission there. The official, after going through the introductory letter, led me to a respondent who happened to be an illegal miner. The respondent led me to select the eleven respondents for the one on one interviews and also to select a group for the focus group discussions, which was made up of eleven members. The researcher, with the help his two research assistants, administered the one-on-one interview schedules with the eleven respondents.

After the individual interviews were conducted, the group was also brought together to begin the focus group discussions. This took place after the researcher had explained the purpose, guidelines and directives on how the discussion was to be organized. The focus group discussion was again conducted with the help of two research assistants, one taking notes while the other was tape recording the discussions. The discussion lasted for forty-six minutes after which the members were refreshed with drinks and pastries. The researcher and his assistants, with the help of the “key informant” moved to Kyekyewere and went through the same procedure as that of Dunkwa-On-Offin.

In all these cases, the researcher made sure that the environment was so convenient for them. The researcher, even though he could have gotten the respondents at their sites, decided to wait for them to close from work. After close of work, the researcher managed to get them to group in a serene environment devoid of distractions, either through noise making or unnecessary movement by some creatures.

3.8 Ethical Considerations

Research ethics are the ‘moral principles, norms or standards of behaviour that guide moral choices about our behaviour and our relationships with others’ (Blumberg et al.,

2005: 95 cited in Saunders et al., 2007). These therefore relate to questions about how we formulate and clarify our research topic, design our research and gain access, collect data and process data. To ensure this, the researcher's behaviour is guided by the code of ethics appropriate to academics and the profession or association of the researcher. The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from participating in research activities (Cooper and Schindler, 2003). In this wise, four important measures were considered:

- Confidentiality: Even though the respondents were individuals and belong to specific institutions, the confidentiality of the information given by respondents was paramount to the researcher. Thus, extreme care was taken in order not to reveal the identity of respondents.
- Deception: Withholding of information and/or misleading of participants are unacceptable. All information that the respondents needed were made available to them. The objectives of the study and the contribution it will make to them were fully explained. Thus, the issue of deception was totally eliminated.
- Consent of Respondents: The consent of all participants was sought after they have been informed about the objectives of the research.
- The respondent is not obliged to complete the questionnaire or interview schedule (<http://www.bps.org.uk>). No one was forced or coerced to fill the questionnaire or answer all interview questions. The responses were entirely voluntarily made.

3.9 Data Analysis

Responses from the interview schedule and focus group discussions were checked for accuracy and completeness. The schedules were numbered serially, edited, collated, coded and fed into the computer. The nature of the interview schedules and Focus Group

Discussions constructed demanded the use of the qualitative process of analyzing the data obtained. Indeed, all the two types of data were edited for consistency of responses.

The qualitative data responses were obtained from both the open ended questions and the Focus Group Discussions. The responses from the former were summarized, organized and interpreted in the form of tables, bar graphs and pie charts. This was to ensure that the results derived from the study could be communicated without any technicalities. To the latter, the discussions were guided and the responses of each of the groups were recorded using tape recorder and the researcher's field notes. They were transcribed and translated into English in the respondents own words as closely as possible. To ensure some degree of uniformity, however, efforts were made to reach a consensus on the responses so that in the end what was recorded was one on which the group as a whole had reached an agreement. This therefore made it possible to use descriptive-narrative methods to analyze responses from the Focus Group Discussions. Indeed, the new ideas and insightful findings gathered were used as anecdotal evidence to triangulate responses gathered from the interview schedules

CHAPTER FOUR

ANALYSIS OF DATA AND PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents summarized findings and analysis of the data obtained from the field. The data was obtained from twenty- seven (27) respondents sample used for the study. The presentation is structured according to the research objectives as follows: political factors, economic factors, social-cultural factors and the extent to which non-participation in policy formulation inhibit illegal miners from registering with the Minerals Commission of Ghana.

4.2 Demographic Characteristics

Some research findings available indicate that illegal miners are a homogenous group but are only linked by their decision to participate in illegal mining. Data on the following demographic variables were collected to ascertain the background of the respondents. Based on this the researcher sought to find out age, sex and education of the respondents.

On the issue of the age of the respondents, the researcher's quest indicated that majority of the respondents; representing 51.8% out of the total respondents were between the ages of 31-35 years. To add to this, 33.3% of the respondents fell within the 26-30 category of the age range. 7.4% found themselves in the 36-40 categories of the age ranges and only 11.1% were within the 18-25 age category.

It is worthy of note that according to the National Youth Policy of Ghana (2010), a youth is considered to be someone who falls between the ages of 15-35 years. It can therefore be concluded, therefore, that an overwhelming majority of the respondents, twenty-six of them representing 86.7%, are youths.

With reference to sex, all respondents were male which shows that male are dominant when it comes to illegal mining. All twenty-seven respondents were males in Dunkwa-on-Offin and Kyekyewere. This attest to the claims that the illegal mining activities are male dominated.

On the educational level of the respondents, the researcher observed that majority of the respondents, who were twenty in number, had basic education while five of them had no formal education. Only two of the respondents had secondary education while not even one respondent had tertiary education. As per the responses given, there is a clear indication that there is generally a low level of education among the respondents.

4.3 Political Factors

The vast majority of public policy aims to shape and facilitate our behaviour. As citizens, communities and policymakers, we want to stop 'bad behaviours' but rather to encourage 'good behaviours'. We may not agree on how we would like policymakers to change our behaviour. But whether we like it or not, the actions of policy-makers, public service professionals, markets and our fellow citizens around us have big, and often unintended, impacts on our behaviour. Based on this preamble, responses were sought from the respondents on how political factors inhibited the registration of their activities.

Members of the public have long served as the “eyes and ears” of the communities in which they reside and work. Community members have a vested interest in keeping their neighborhoods safe and are critical to support law enforcement’s duty to prevent and investigate any negativity in their communities. Many law enforcement agencies are already implementing local programs to enhance their community’s awareness of reporting suspicious activity, yet there is little guidance or research regarding best practices to improve citizen reporting. Based on this notion, the researcher wanted to find out the awareness of mining laws among the respondents. The study solicited response from the respondent on whether they have an idea about an institution in charge of regulating mining activities.

In line with this, the results indicated that eighteen out of twenty-seven respondents had an idea of institution in charge of mining. However, only nine respondents did not have any idea with regards to institutions in charge of regulating mining activities. From this result, it can be deduced that most people engage in illegal mining in the Dunkwa-On-Offin had knowledge of mining institutions in Ghana. All five owners of mining pit had knowledge on institutions in charge of mining. The comments from three of the leaders attest to this:

The Minerals Commission is in charge of mining activities in Ghana.

They are the people that sell minerals for the country.

The Minerals Commission sees proper utilization of the state’s natural resources like gold, diamond, bauxite among other.

In furtherance to the discussion, illegal miners in the Kyekyewere had this to say:

The Minerals Commission helps individuals, group of people as well as organizations to acquire concession for mining.

*The Minerals Commission helps in licensing of mining activities.
The commission takes miners through registration process.*

The commission registers large and small scale miners so that their operation becomes legal.

The leaders of two (2) mining pits in the Kyekyewere community confirmed the responses by their subjects. They had this to say:

The Minerals Commission sees to all mining operations in Ghana

The Minerals Commission supports the mining operation in Ghana

The confirmation of the responses that the researcher got from the one-on-one interview conducted in the two communities came to light during the focus group discussions that was organized to solicit their awareness of an institution that was in charge of mining in Ghana. Though a few of the members of the group did not seem to know, the conclusion the researcher was able to draw was that they were aware of an institution that was in charge of mining in Ghana. Upon the mentioning of Minerals Commission, the researcher sought to find out whether the group knew about the functions of the Commission and this was what they had to say:

They are in charge of educating small scale miners and taking the responsibility of making sure that all small scale miners register.

The Minerals commission is in charge of registration of mining activities.

On the other hand, nine (9) respondents said they have heard the name of an institution in charge of mining activities but they do not know the exact institution. Three miners had this to say:

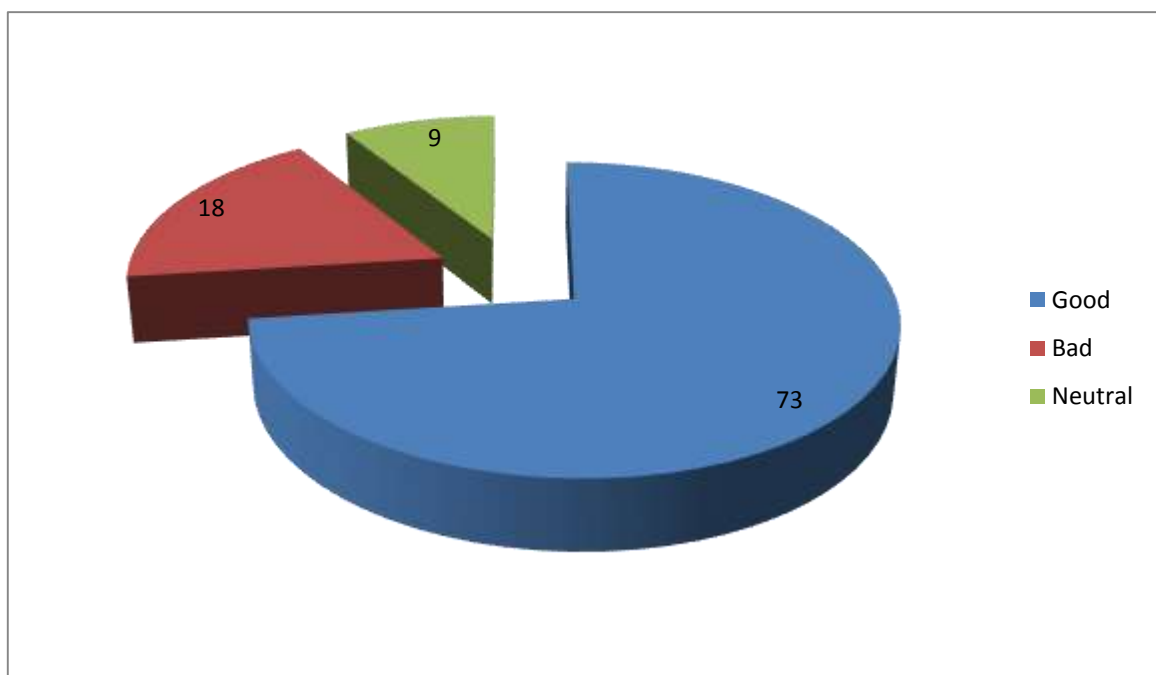
In every country there are institutions that are in charge of mining but honestly speaking I don't know if there is such an institution in Ghana.

Ghana has no such institution in charge of mining. Ever since I was born, I have never heard of an institution which regulates in mining activities. My father initiated me into this lucrative business.

Na den Na yefer3 no Minerals Commission, Massa mining bi mining, u get the land, u go fi go do. Literally meaning: am not aware of an institution called Minerals Commission. If you get your land, you can start your mining activities.

Comments from the miners show that more than half are aware of an institution in charge of mining. Vice versa, just a handful of miners were not aware of institutions in charge of mining and its functions. In addition to the discussion, respondents were asked to bring out their ideas on illegal mining. Twenty five respondents had a good idea about illegal mining. The remaining ten had a negative view about their operations. The responses were captured in percentage as represented in figure 4.1.

Figure 4.1: Opinion of Illegal Mining



Source: Field Data (2014)

According to figure 2.3, a majority of the respondents had a good notion about illegal mining. This was represented by 73% of the respondents. The respondents attest to this fact:

Illegal mining is good because income generated from mining activity is encouraging.

Illegal mining is good because I get a lot of money when I sell the gold.

I used the proceeds to cater for my family needs.

Survival of the fittest! In Ghana, if you don't find ways to get some money for your up-keep, u will die like a rat. Besides there are no jobs in the country. This is what I call self-employment.

Eighteen percent of the respondents thought otherwise. They had this to say:

Illegal mining is bad because of the effect it has on the environment.

Illegal mining is very risky. I remember a day when I was trap in a hole in search of gold. It was just by Gods' grace that I was rescued by other colleagues.

I heard from the media that illegal mining polluted the Offin River. It was also said in the media that illegal mining destroys farm lands.

It is very dangerous to my health. I was diagnosed with Asthma last year because of illegal mining but I have no option than to engage in an activity to generate an income to cater for my family.

Few respondents expressed indifference as neither good nor bad. Only 9% attested to this fact. They had this to say:

Hmmmm, illegal mining has it benefits as well as disadvantages. There is a lot of money in this operation. Also, one can die anytime due to the risky nature of the job.

I have seen people dying due to illegal mining in different regions. Also, without this operation, we will not have a means of livelihood. This is sole job for young men within this community.

We have dependents. The money we get is used to solve problems from various arenas within our households. But on the other hand, I know we are destroying the environment.

Looking at the responses, it can be deduced that most of the miners have good impression about their operations. With reference to the comments from the respondents, it could be deduced that illegal miners are aware of the laws regarding mining despite responses which shows that the operations are good. This comes amidst the responses of the effect illegal mining have about their operations.

With reference to analyzed result concerning the bureaucratic administrative procedures for registration of mining activities, fourteen of the respondents were aware of the procedures for registration of mining activities while nine had no idea about procedures for registering mining activities. However, four of the respondents were not sure with reference to the procedures for registration. Questions to solicit for awareness of procedures for registration of mining activities were posed to the fourteen respondents. This was to enable the researcher get clue if the respondents really are aware of registration procedures. A section of the respondents from the Dunkwa-On-Offin who were aware of the procedure for registration had this to say:

Registration of operation involves purchasing of forms from Minerals Commission, the District Assembly and the Environment and Protection Agency.

The registration procedure involves swearing of oaths at the Supreme Court

The process you have to go through is very cumbersome. You need to get a sizeable land from the land owners, register the land with the lands commission and many others

The minister issues the license for operations

You must invite the Minerals Commission to come inspect the land before you can proceed with your operations.

In line with the comments from the respondents, it could be deduced that miners have a fair idea to registration process. Even though responses given are disjointed, the comments

are enshrined in the Mineral Commission procedures for registration of mining activities. But during an interview with the Minerals Commission Official, he stated the actual administrative procedures one has to go through to acquire the operating license. This was what he had to say:

There are compulsory agencies anyone who is seeking a license should go to. The first place to visit is the Minerals Commission to pick up application forms from the office, then the person goes to the EPA with a site plan. Officials from the EPA will then go with the person to inspect the site after which a permit will be issued. After the permit has been issued, certain documents are to be presented to the District Office to be worked on. It takes twenty-one (21) working days for those documents to be worked on. So after twenty-one (21) days, the person moves to the Lands Commission, goes to either the High Court or Supreme Court for stamping. Then finally, the whole process ends with the Minister who then issues the license after ensuring that all the processes have been followed. (Personal Interview, 2014)

Moreover, respondents exhibited their awareness of laws governing mining activities in Ghana. This is what some respondents had to say:

To register every concession before you can start mining.

Am aware of some of the laws governing mining but I only know a few.

Every mining activity should be registered with the appropriate authorities.

All mining activities ought to be registered.

Small scale miners are to register with the authorities.

Responses shows that a little of half of the population have good idea about laws governing mining activities in Ghana. However, the remaining thirteen out of the twenty-seven respondents seem worrying as they have no idea about mining laws of the operations they are engaged in. This could be attributed to the illegal operations by the respondent.

The researcher again sought to find out the duration of time for one to acquire an operating license. Out of twenty-seven respondents that were interviewed, thirteen of the respondents

indicated that it takes a period of about one year to acquire a license. The respondents were asked whether the length of time played a role in the non-registration of their activities. This is what some of the respondents had this to say:

The time involved is too long and this seriously deters us from registering.

Me I can't wait for one year to get a license while I keep on getting hungry while I know perfectly well that there is gold in the soil on which I live.

It takes too much time to acquire a license.

It takes too much time so we don't even waste our time.

In light of the above supposition, it can be observed that a slight majority of the respondents are of the view that the duration for the acquisition of a license was too long which served as deterrence for the legalization of their activities.

Despite the some of the responses that some respondents gave indicating that it took a year to acquire a license, which they believed was so long a period, ten of the respondents indicated that it takes usually six months giving the impression that the time period that is usually needed to acquire a license was not long. They therefore highlighted the fact that it could not be a reason why they are not registering their activities. This is what a section of those respondents who fell within this category had to say:

No, six months is not too long a duration and therefore under no circumstance can it be a reason why we don't register.

I don't think three months doesn't take too much time.

It doesn't take long only if you follow all the procedures. But if you delay, the process will also delay.

It was surprising to note, however, that four of the respondents did not have the slightest knowledge of how long it took for a license to be acquired. When asked the reason why they didn't know, two of them had this to say:

As for me I don't care to know how long it takes to acquire the license. All I know is that am not ready to get a license yet. If I am ready to get a license, I will find out.

I don't know ooo boss, I am just looking for money, not how long it takes to acquire a license.

How does me knowing the duration it takes to acquire a license put food on my table? I only think about things that matters to me most. This duration thing is less of my issues.

The Minerals Commission Official totally disagreed with all assertions that were made by the illegal miners. He explained that the time duration for the acquisition of a license does not take that long. He indicated that technically it takes ninety one days, which is equivalent to about three months, to acquire a license. He however admitted that the speed with which someone will go through the process will determine how soon the person might acquire his or her license. He further stated that even though the duration was over a period of ninety one days, people can take a longer period to acquire the licenses if they themselves do not follow the procedures to facilitate the processing of the license. According to him, those who indicated that it could take up to a year to acquire a license are those who are not serious about the processes. These were some of the things they had to say:

My brother, it is not true. It doesn't take one year to acquire a license. It only takes 91 days. But it will only exceed the 91 days when the person himself/herself delays the processes. Some of them if they finish with the minerals Commission and you ask them to go to EPA, they go and stay at home for about a month before they get to EPA. If that is the attitude they adopt for all the various agencies they have to go through, how will they be able to get the licenses between a period of ninety one days. It is highly impossible so in that case there is the likelihood of the duration of the acquisition of their license extend to one year. If that is what they are saying, fine. But that is not what they were trying to put across. They created the impression as if it takes one year to get a license. There are several people who have been able to acquire their licenses just within the stipulated period of ninety one days. (Personal Interview, 2014)

With respect to the amount of land size that government requires them to acquire before licenses are given, there were several interesting responses. Majority of the respondents, about sixteen of them, who were asked about the size of land needed before a license was given gave their ranges between 20-30 acres. The respondents in the Dunkwa-on-Offin community were therefore asked how the size of land affected their decision not to register. This was what some of them had to say:

It is too big to acquire such a plot of land so it means that if we don't get that size of land, we shouldn't eat. We won't even mind them.

Government is sometimes not realistic. How can you ask somebody who doesn't have money and looking for work to do to provide 30 hectares of land before the person is given a license? If I had that huge money, would I be in need of money?

Am sure government does not know the price of a plot of land. If government knows, it won't ask us to bring that huge size of land. Where does he expect to get it from?

Some other illegal miners in the Kyekyewere community also had this to add to what their colleagues had already said:

I strongly believe that government does not want us to register because he should know that there is going to be a general difficulty in get that size of land.

If government does not want us to do the mining, he should tell us than to intentionally prevent us by asking us to bring twenty-five hectares of land before we can operate. Where are we going to get it from?

Well, as for me, it is too much for me to acquire. So I will keep on doing the galamsey business till I am able to acquire the size of land government needs.

A section of the respondents who were in the minority, of about seven, when asked the size of land needed before a license is given indicated that one actually needed less than twenty acres of land size. The respondents were asked how the size of land affected their decision not to register. This is what they had to say:

Fifteen acres is not small ooo boss. I can't get it anytime soon so as for me I will still continue with my mining activities.

I honestly think that 18 acres is not too big a land for anybody who is serious about registering his concession. The size of land is not deterrence at all.

As for me I think ten acres is okay. If I really want to get it I can get it. So it is not a problem at all with regards to registering.

It was also very interesting to find out that quite a significant number, about five of them, of the respondent did not have any idea of how much size of land was needed in order to get a license not to even talk about whether it is too big or too small. The researcher tried to get some views from the respondents on how come they do not seem to have the least knowledge about the size of the land that was required for an operating license to be given.

This is what some of them had to say:

But how do you expect me to know when nobody has come to tell me?

I don't even want to know because if it is even one plot that they are asking for, I can't get it for them.

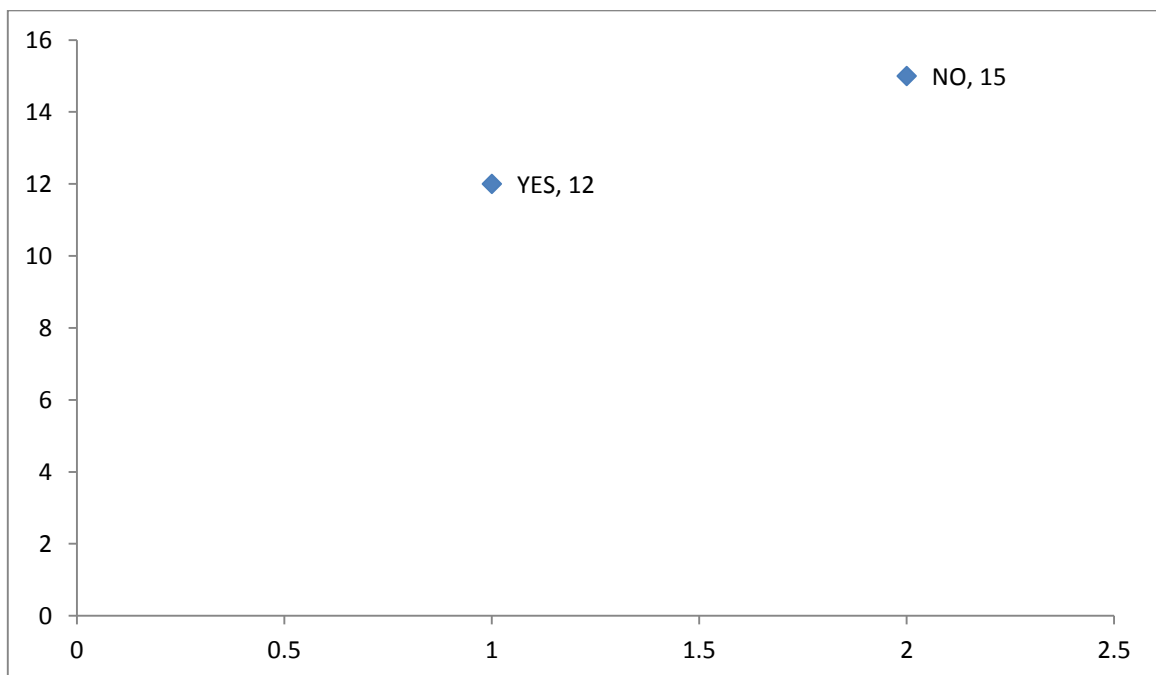
They keep on changing the sizes of the land that is needed so I don't need to be following up on their unnecessary changes.

It was realized that there was a little bit of convergence and divergence in the responses the respondents gave vis a vis the respondents of the Minerals Commission Official. He stated categorically that as per the laws, one cannot exceed 20 acres if the person wants to register as a small scale miner but made it clear that a person can even register one acre of land for a small scale mining business. Therefore based on this, he rubbished the allegations that were being made by the respondents. This was what he had to say:

It is not compulsory to have 25 acres before you can get your land registered as a small scale miner. That is not what the laws state. The law says that if you want to get registered as a small scale miner, your land size should not exceed 25 acres. But you can come with as little as 1 acre, and we can register it for you if all the necessary processes are gone through appropriately. (Personal Interview, 2014)

Still on the political factors that could deter these illegal miners from registering, the researcher sought from the respondents whether government officials had a role to play in the illegal mining activities that deter them from registering. Their responses were captured in percentage as represented in the figure below.

Figure 4.2: Responses on the Role of Government officials



Source: Field Data (2014)

According to the figure above, fifteen of the respondents, who were in the majority, indicated that government officials were in no way involved in the illegal mining activities that could play a role in they not registering their activities.

The responses that were derived from the remaining twelve respondents indicated that some government officials were seriously involved either directly or indirectly in the illegal mining business. The researcher therefore probed further to ask the respondents, who indicated that some government officials had a role, the exact roles they play which

deters them from registering. Out of the twelve respondents who made those allegations, nine of them pointed out that some of the government officials themselves had unregistered lands. Among some of the responses the respondents gave with regards to their unregistered lands were:

Most of the big men in government have some of the lands that are not registered so who are they to come and tell us to register.

They themselves have unregistered lands so it does not encourage us to register ours.

Some government officials have lands that are not registered which discourage us from registering because if our so-called leaders who are to set examples for us to follow are doing this, then what are we supposed to do?

Some of the respondents who claimed some government officials were included in the illegal mining activities indicated some reasons different from the earlier stated one. They indicated some of government officials take bribes from the illegal miners. These are some of their responses to substantiate their claims:

Some of them are mostly aware but they are usually given some money so they don't mind us.

Some of them at the district office take monies from us and promise not to allow some other officials to harass us.

The officials at the district office take bribes from us and promise to serve as cover ups for us so we know we are secured.

The researcher still sought to find out from the respondents whether security officials had a role to play in the illegal mining activities that deter them from registering. Twenty-four out of the twenty-seven respondents indicated that security officials played serious roles in the reasons why most of them have their businesses unregistered. The common thing that runs consistently through the responses of the respondents was the issue of the collection of bribes. These are some of the responses that some respondents in the Kyekyewere community gave to that effect:

They come around to demand some money because of the activities that go on here.

They take monies from our bosses so that they alert us anytime time there is going to be an operation.

They sometimes take bribes from us and inform us when there are senior security officials coming from outside the town.

In furtherance of this, some of them in the Dunkwa-On-Offin community still made some relevant contributions. This was what they had to say:

Ooooooh in fact, they really take bribes from us. So as soon as we pay our 'dues', then we know that we are free.

Most at times, the police come around to collect monies from us so usually they don't worry us when they see us. In fact some of them are even our best friends.

You see where the police barrier is? And you see where we are mining? Do you think that we don't know they are there? Or you think that they don't know we are working here? We know and understand our own language. They come violently to threaten us when we haven't given them something in a long while.

In spite of the responses that other respondents made suggesting that some security officials had a role to play, three of the respondents differed on that indicating that the security officials had no role to play, either directly or indirectly, in the illegal mining business. Therefore to them it was not a reason or a factor people will base on to justify the unregistering of the businesses. The results presented give a clear indication that there is a serious problem with bribe taking from security officials in the two selected communities because majority of the respondents showed consistency in their responses.

4.4 Economic Factors

Lack of working capital in any venture really causes a lot of problems. It creates so many problems especially when there is no capital to start the business and the individual involved is bent on still going into the business with or without the required amount to start the business. This encourages people to find illegal ways of entering into various

businesses. Based on this preamble, responses were sought from the respondents on how economic factors inhibited the registration of their activities.

The respondents were asked how much money was charged in order to get a concession registered. Out of the twenty-seven respondents that were interviewed, twenty-one of the respondents indicated that one needs between GHC 4,000 - GHC 5,000 in order to get a concession registered and a license acquired. It must be stated that only four of the respondents indicated that the amount of money that was needed to register a concession was GHC 3,000. It must be stated however that two of the respondents had no idea of how much money was involved in the registration of a concession and the acquisition of a license.

The twenty-one respondents were therefore asked whether the amount of money required to get a concession registered played a role in the non-registration of their activities. These were some of the comments respondents had this to say:

Eeeeei boss! The amount is not a small boys money oo. Fifty million cedis. That's how we called it in the old currency. The amount even scares me. Where will I get this amount of money from?

Things are really hard these days ooo I can't pile 4,500 to go and pay to register a common concession.

If I had that huge money, I would have invested in a different venture. If I had money I won't be doing this business.

This indeed gives a clear picture of the role that the required amount of money needed to register a concession and acquire a license plays in the non-registration of their mining activities. This is evident in the responses the overwhelming majority of the respondents gave.

It was not surprising that the responses that came out from the Focus Group Discussions within the two communities showed that almost the same responses as was noticed during the one-on-one interviews. The group admitted that the money involved was so huge that it served as a deterrent for their non-registration. These are a few quotations from the Focus Group Discussions to that effect.

You don't really seem to understand some of these decisions. 40 million cedis!!! Well I don't have that money now. But if they say we should get that money before we can get a license they should not worry, we will pay when we get the money. But until then "man must chop"

Money is a problem to all of us. How can we pay this amount of money? How many years will I work and make this money.....even at all, what work will I do that will make me make about 40 million cedis? Then before we get that money, poverty would have killed us.

In the quest to find out the truth or otherwise of the allegations that the respondents made with regards to the amount involved in acquiring an operating license, the researcher interviewed officials of the various agencies, assemblies and departments that were in charge throughout the processes of the license acquisition. These are what they said about how much was charged at their various quarters:

*At the Minerals Commission, you would have to pay a total of nine hundred cedis. One hundred cedis is for the payment of the application form, two hundred and fifty cedis as processing fee and five hundred and fifty cedis as confederation fee. (**Minerals Commission: Personal Interview, 2014**)*

*At EPA, after everything you would have spent seven hundred and fifty-five cedis here. The applicant will pick a form for five cedis after which seven hundred and fifty cedis will be paid after everything is successful. (**Environmental Protection Agency: Personal Interview, 2014**)*

*At the District Assembly, the documents go through processes which cost one thousand cedis. (**District Assembly: Personal Interview, 2014**)*

There are several things we look at when they come to the lands commission. But in general, one can pay about seventy-five thousand cedis. (Lands Commission: Personal Interview, 2014)

Even though the Supreme and High Courts refused to indicate how much they charge, it is clear, as per the responses, that one needs almost about seventy-seven thousand, six hundred and fifty-five cedis to register a concession, which is on the high side.

The researcher again sought to find out who the respondents who they sell the minerals to. It was interesting to find out that all the twenty-seven respondents sold it to any buyer who readily had money and wanted to buy. Some of their responses are highlighted below:

As for me I sell to any individual who is interested in buying so far as the price that the person is offering is good.

Anyone and everyone. Only on condition that you have money to buy, I will sell it to you.

It is sold to anyone who is willing to buy.

We sell it to anyone who is willing to buy at the price it will be sold.

Due to the fact that there were multiple responses, there were some respondents who, apart from selling the minerals to any individual who was willing to buy, had other buyers. The researcher upon asking the respondents had these views from them:

There are some buying companies here so if nobody buys our gold then we take it there for them to buy.

Some companies advertise on radio and claim they give good prices so I look for those companies and I go and sell my gold there.

There are many buying companies so that's where I sell my gold, only if their offer is good.

Responses from this section gave a clear picture that the respondents have a huge problem with the amount of money that was needed to get a concession registered and a license acquired. Majority of them indicated that it was a major reason why they did not register.

Most of them also sold their gold to anyone regardless of whether the person is a licensed buyer or not. They sold it to the buyer who offered more money.

4.5 Socio-Cultural Factors

A research conducted by Hilson (2001) showed that there is a strong correlation between civic education and the exhibition of good behavior. It is also well established that traditional leaders have various roles they play in communities in order to get community members exhibit of good behaviors. Based on this preamble, responses were sought from the respondents on how socio-cultural factors inhibited the registration of their activities. This section was broken down into two. The first aspect looked at the social factors that placed emphasis on environmental education and the second looked at the role of the chiefs.

The researcher therefore sought to find out whether authorities of the Minerals Commission or other authorities visit them. Twenty-three of the respondents admitted that authorities of the Minerals Commission visited them regularly while four of the respondents indicated that no authority from the Minerals Commission or from any other agency visited them for any reason.

In light of the above supposition, the researcher further asked the respondents, who gave responses to indicate that Minerals Commission officials come to visit, questions for them to indicate how often they come round to visit.

The majority of the respondents, who were nineteen in number, indicated that the officials of the Minerals Commission visit them once in a year. The remaining respondents had different views to express. Five of them were of the view that the officials of the Minerals Commission visited them on a quarterly basis while three of them differed from what all the other twenty-four respondents had said by saying that they visit once in two years.

Due to the fact that majority of the respondents acknowledged the fact that officials of the Minerals Commission usually come around to visit them, the researcher sought to find out whether the officials who visit the respondents from the Minerals Commission give them some form of education with regards to the reasons or the need for which they have to register their activities. All respondent agreed that there is a policy on mining in Ghana but had no knowledge with reference to the content of the policy. It could be said that inadequate knowledge on mining laws is a contributing factor to illegal mining because all the twenty-seven respondents indicated that the officials do not give them any form of education on the importance on why they have to get their activities registered.

The researcher sought to find out from the respondents the various things that the officials of the Minerals Commission come to do in the communities if not to educate them on the importance of registering their activities. Some of the reasons that they gave are highlighted below:

Those people don't mind them. They just come and walk around so that people can just see that they have come. They don't come to do any serious education.

As for me from the time I started doing illegal mining, they have not come that they are coming to educate us before so I don't know what you mean by 'do they come to educate us?'

If you see them coming, then be sure that they are coming to take some money from us.

Am sure they go and meet the small scale miners who have registered but I can't tell if they educate them if they get there. But as for us the illegal miners, they don't even mind us. They just pass unconcerned

Coming to do what? The officials themselves are our friends and they don't bother about the illegal activities going on. We live in the same town with them and they don't do any education for us.

In addition, respondents were asked what they think could be done enable them understand mining policy. They reiterated that education on mining laws was a way by which they can understand and abide by mining policy.

With reference to education, all respondents had a view that if they are educated on mining policy, it will go a long way to help them register their activities. This is what three respondents from Kyekyewere community had to say:

If they want us to register our operations, then they have to tell us what must be done and reasons why we need to.

There is nothing that guides our activity. Besides, that is the sole means of livelihood for us. We cannot stop this operation. The only thing is for them to come tell us what the so-called mining policy means.

We need education for us to register.

Irrespective of all that the respondents from the two communities said, an official of Minerals Commission had cause to disagree with some of the things they said. This was how he explained it:

I don't know why these people don't tell the truth. They refuse to say what actually the issue is. We used to visit them regularly but what it is is that if you go there to organize educational programs for them, they refuse to attend so we felt that we were wasting our time so we stopped. So in a way its true we don't visit regularly but they don't patronize if we do organize programs

In conclusion, it is observed, through the responses of the respondents and the Minerals Commission official that actual Environmental Education is lacking in these two communities and the absence of it might be a reason for non-registration.

With regards to the cultural factors, the researcher sought basically to find out whether the chief played a role that in one way or the other deter them from registering the activities with the appropriate authorities. The researcher asked the respondents how they were able to acquire the land on which their illegal mining activities were being performed. It must be stated, however, that some of the responses that the respondents gave overlapped. Twenty-four of the respondents indicated that they acquired the lands from individual land owners who leased the land to them. Some of the responses that were given to buttress this claim are seen below:

It is like doing business in Accra. The way people give their houses for rent that is what individuals who own land here do. They give it to us for a fee.

We depend on individuals who are willing to lease their lands to us for our activities.

Individuals who own lands sometimes give them out for lease and rarely, sometimes, do they sell the lands for us when they have really lost interest in it.

When individuals really need money, they lease or sell their lands so they can get some money. So we usually take advantage of those ones and get it.

In furtherance of this, some of the respondents gave overlapping responses by indicating that they acquired the lands from the chiefs. These are some of the responses the respondents gave to support their claims:

If you see a land and you think you want it and they tell you it is for the chief, then you will have to go and see the chief and get the land.

The chief sometimes lease it out.

In addition to this four of the respondents indicated that they were using family lands for their businesses. These were what they had to say:

This business is being done on the land that I inherited from my late father.

This is a family business and we are doing the galamsey on the family land.

Some of us are using our lands that our forefathers left for us.

The major question was posed to the respondents to solicit their responses with regards to whether the chief played any significant role with regards to the non-registration of their mining activities. An overwhelming majority indicated that the chief did not play any role with regards to the non-registration of their illegal activities. It was only one respondent that was of the view that the chief had a role to play in the non-registration of the mining activities. This was what he had to say:

After selling or leasing the lands to people, they do not go and check what the land is being used for. If the chief doesn't really care about what the land is being used for, then it in a way serve as a deterrent because in this case it gives a clue that they are in a way in support of it.

To further interrogate the issue, the researcher sought to find out from the respondents whether the chief was aware of their illegal mining activities. Sixteen of the respondents were sure of the fact that the chiefs were aware. When asked how they got to know that the chiefs were aware, this was what some of them had to say:

I am sure he is aware because if even people who live far away from this place are aware that illegal mining goes on here, how much more will a whole chief will not be aware.

The chief is the custodian of the lands so it will be surprising to mention that the chief is not aware of what his own people are using the lands under his jurisdiction for.

I am saying he is aware because he lives in the community and for that matter he drives through the town and the activities are clearly seen. Let's even assume that he doesn't pass through town, doesn't

he have messengers and elders who come to report on things that are going on in the town?

I think that the chief is aware because nobody needs to tell you that he is aware of the illegal activities.

None of the respondents indicated that the chief was not aware of the illegal mining activities because they claimed they did not have evidence to support that claim but rather wanted to play it safe by indicating that they were not sure. These are some of the responses the respondents came up with:

As for me I can't say whether he is aware of it or not because I don't know.

How can I tell since I don't stay with him?

To the respondents who indicated that the chief was aware of their illegal mining activities, the researcher sought to find out from those respondents the reaction of the chief towards the illegal mining activities. Even though twenty-two of the respondents were sure that the chief was aware of their illegal mining activities, when asked the reaction of the chief towards the illegal mining activities, they indicated that they cannot tell. These were some of the comments that they made:

I know he is aware but as for his reaction towards it I cannot talk for him.

It will be unfair to indicate whether he is in support of it or not because I do not know so I will prefer being silent on an issue I have no knowledge about.

I cannot talk about it because I don't know. Maybe you can ask other people. Who knows; they might know. But as for me honestly I don't know.

It is, however, important to note that some of the respondents gave the indication that the chief has shown clearly signs of disapproval towards this kind of activities. The sayings of the respondents attest to this fact:

We still continue with our mining activities even though he has warned several times.

He is strongly against it and does not support it but we don't mind.

He has cautioned us on several occasions but we also can't stop because there are no jobs for us.

He fights seriously against it by issuing several warnings but now he has stopped. Am sure he is tired of us because we are still into it.

As for the chief dierrr, honestly sometimes he sends his gong beaters to make announcements encouraging people to stop.

Responses show that an overwhelming majority of the respondents are of the view that officials of the Minerals Commission do visit but do not do so with the aim of coming to educate them on the reasons for which they should get their activities legalized. The other issue that was evidently clear from the responses of the respondents was the fact that the chiefs had absolutely no role to play in the non-registration of their illegal business but even rather went on to indicate that they showed their disapproval towards those activities.

4.6. Non-Participation in Policy Formulation

It is worth noting that policy formulation and implementation are very critical in all spheres of the society. In this regards, it can be attested that there are mining policy which serves as a framework for a nation, organizations as well as individuals in their activities. On the hand, illegal mining which is not guided by a policy is on the increase due to non-registration of activities of these miners. Based on this, respondents were asked if they had an idea about any mining policy in Ghana.

Furthermore, respondents were asked if they participate in policy formulation. All respondents were not included in mining policy at all stages be it the district level, regional level and national level. However, they were of the view that if they participate in policy

formulation, it will help them to understand all dimensions of mining policy and besides since they have a clue about the policy, it will prompt them to register their operation.

Comments from the respondents were:

If you participate in decision making, it will help you to abide by it.

They don't take us for anything. Am telling you the truth, if we are involved in all this process, then there wouldn't be anything called illegal mining in Ghana.

Instead of the authorities bringing us together to take a decision that will be lasting, they rather prefer to be chasing us around.

It will be wise to include us in every discussion regarding mining because we also participate in contributing to the development of Ghana.

The comments from the respondents attest that the nature of community non-participation in policy formulation is important in arresting the social canker that has bedeviled communities. It can therefore be said that community participation in policy formulation is an important tool when it comes to licensing of operations since it will pave way to their own decision. This was confirmed by the two Focus Group Discussions that the researcher conducted for the respondents. The agreement the group came to, came in as a confirmation to what the respondents who went through the one-on-one interview said. The group was asked if they are involved in policy formulation. It was interesting to note that the members of the group unanimously said no. The researcher further sought to find out whether their non-participation in policy formulation inhibits their registration. This is what came out of the Focus Group Discussion at Dunkwa-on-Offin:

Don't mind them. Anytime they want to do something, they think that we are nobody so they don't ask us anything. If they think that they can do anything without us, then it means we can also do our jobs without them.....if they want the trouble to reduce, the they should sit and discuss issues with us.

In furtherance of this, the Focus Group Discussion that was conducted by the researcher at Kyekyewere had participants confirming the discussions that were made in relation to whether non-participation in policy formulation inhibits decision not to register. The group admitted that they did not partake in policy formulation. The indicated how this inhibits their registration. This was the key conclusion that the group came to:

Some of us want our voices to be heard. If they are able to come down to our level and understand us, the issue would not be getting out of hand. There has to be a dialogue because it seems as if we don't understand them and they also don't understand us. So we believe when our voices are heard and considered, it is possible we might register.

In conclusion, almost all the respondents argue that their non-participation in policy formulation was a factor for the non-registration of their activities.

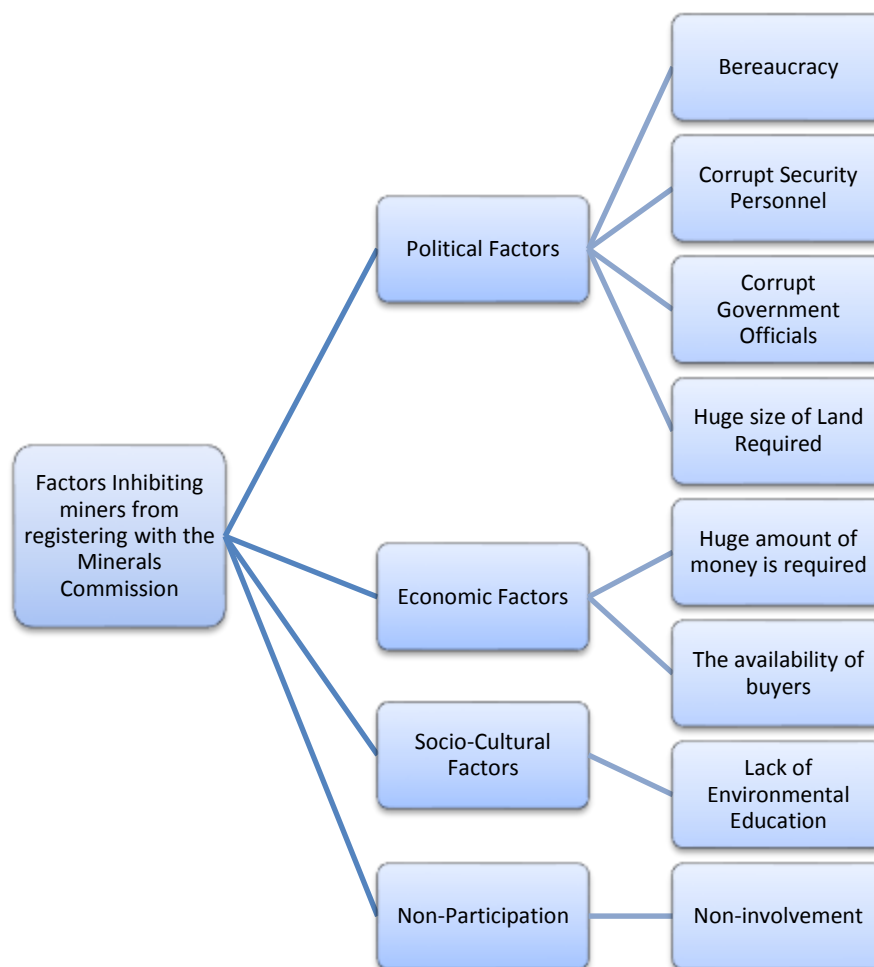
CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This chapter presents a discussion of results of the study. The areas discussed were outlined along these headings; political factors inhibiting miners from registering operations: awareness of mining policies, role of security of officials, role of government officials, administrative procedures, size of concession. The section further captured economic factors inhibiting miners from registering: cost involved and availability of market. Also, socio-cultural factors were captured in this section. It included: role of chiefs and role of environmental education. The chapter finally discusses how non-participation in policy formulation and implementation affects non-registration of mining activities in the Upper Denkyira East District.

Based on the literature and the results, the findings that came out has been conceptualized and that can help students undertake several studies that give detailed factors why people are not registering their activities. The researcher was able to draft a framework to serve as a contribution to knowledge. Figure 5.1 is a framework of factors that inhibit illegal miners in the Upper Denkyira East District from registering with the Minerals Commission of Ghana.

Figure 5.1: Framework on Factors Inhibiting Miners from Registering

5.2 Political Factors

The study looked at political factors inhibiting miners from registering their operations.

The study found out several reasons under this heading. The following themes were generated from the analyzed results:

- Awareness of policies with regards to mining
- Role of security of officials
- Role of government officials
- Administrative procedures
- Size of concession

Awareness on mining policies is generally part of a larger business intelligence or knowledge management initiative. Since state governments are complex organizations that collect and process massive amounts of information, mining policies can help provide value and streamline the operations of miners. In addition, mining policies can be predictive and uncover hidden patterns that communities can strategically use to reduce costs, increase business expansion opportunities, and detect fraud, waste and abuse that drain away countries resources.

In line with this, the study outlines Acts and policies of mining upon which respondents were asked to mention their awareness on. The study found out that all respondents knew that there were Acts and policies regarding mining activities but had no knowledge on what constituted the acts and policies of mining. The implication is that unawareness of the content of mining policies has contributed to reasons why miners do not register their operations. This makes their activities or operations illegal. This is a summary of the responses the respondents gave:

*The minerals commission is in charge of mining activities in Ghana
The commission registers large and small scale miners so that their
operation becomes legal*

These comments by the respondents on awareness of acts and policies confirmed that respondents were not aware of contents of mining laws. In comparing the result to a study by the United Nations Mine Action Service (1997), it came out that inadequate awareness of mining policies is a contributing factor to non-registration of mining activities. The United Nations Mine Action Service (1997) attributed this reason to lack of mass education on mining in mining communities and its environs.

In addition to this, Hilson (2001 and 2002) indicated that public policy awareness can improve the rates at which miners register their operations. This is to say that increasing public knowledge about the registration process of mining activities can serve as opportunities for recovery based on educating the public about illegal mining, impact on illegal mining on communities as well as the nation at large; improving understanding about how to obtain insurance coverage and access treatment; and Confronting discrimination and misinformation on mining activities. In line with this, the opportunity to reduce the gap between people who need and people who receive prevention of illegal mining is largely a public education challenge.

With reference to analyzed result concerning procedures for registration of mining activities, sixteen of the respondents were aware of the procedures for registration of mining activities while ten had no idea about procedures for registering mining activities. However, four of the respondents were not sure with reference to the procedures for registration. Questions to solicit for awareness of procedures for registration of mining activities were posed to the sixteen respondents. This was to enable the researcher get clue if the respondents really are aware of registration procedures. This is a summary of the responses they gave to indicate their awareness of the laws regarding the processes of registration:

Registration of operation involves purchasing of forms from Minerals Commission, the District Assembly and the Environment and Protection Agency.

The process you have to go through is very cumbersome. You need to get a sizeable land from the land owners, register the land with the lands commission and many others

In line with the findings unearthed by the study, it indicates that there is a need to formulate an initiative that will meet the need by building capacity and raising public

awareness on registration benefits of mining activities, reform, parity, and other developments in the states mining policy. A study by Barrick Gold Corporation (2001) showed that effective communications within the wider community is essential to building greater awareness and the understanding of mining operations and the risks and dangers associated with trespassing and illegal mining. To create awareness on laws and policies by the corporation, the mining firm engages in community based public education campaigns on the unlawful nature and risks associated with illegal mining and trespassing. Community awareness programs are also aimed specifically at illegal miners to ensure that people trespassing on the mine site are aware that it is unlawful and dangerous to do so, and they could be injured or killed by rock falls, dangerous ground or heavy machinery. Those who refuse to heed the warning and stop this activity are made aware that they may be apprehended by security personnel and prosecuted through the courts. Information is also given about large fines that can be imposed by the courts. The activities of intruders who invade the pit are not “mining” in any conventional sense.

Many studies on policy awareness use results of opinion surveys as a proxy for level of environmental attitude. Although there is a difference between opinion and attitude as Worcester (1996) states “...opinions: the ripples on the surface of the public’s consciousness, shallow and easily changed; attitudes: the currents below the surface, deeper and stronger...” many analysis on attitudes are drawn from the results of opinion surveys. Considering this wide use of opinion survey results, basic trends on public opinion on policy with regards to mining are reviewed. The public opinion survey on policy is generally categorized into time series and cross-national perspectives. The time series data on public environmental concerns exist mainly in developed countries such as the United States, Europe, and Japan. In line with this study, it came to light that miners

were aware of bodies in charge of mining. However, respondents' awareness was not detailed with reference to the Acts of Parliament.

The study of trends in opinion survey is in the Philippines by Tazuale (2009) affirm that illegal miners and trespasser lack adequate knowledge on mining policies as provided in the constitution. He therefore concluded that lack of awareness of mining policy forms a part in non-registration of operations hence they engage in illegal means which they view as the rights to economic freedom. This study confirms the analyzed results unearthed from the study as large sections were not aware of the Acts of Parliament as well as Policies regarding mining.

With the bureaucratic procedures regarding registration, Jennings (1998) argues that small-scale mining is bedeviled with too many regulations that are mostly designed to constrain it and too few inspectors to ensure that they do. When regularizing informal sector operations, 'the issue is not one of regulation per se but of the form of regulation' (Roberts, 1994). Lagos (1995), also adds his voice by describing how inappropriate regulations can impede the formalization of such operations. Supporters of the illegality-approach argue that the institutional and legal framework constitutes an obstacle to the formalization of the informal sector. They maintain that the formalization or legalization of micro-enterprises is virtually impossible because of government interventions through disproportionate regulation and bureaucracy which are not only excessively time-consuming, but also impose high financial costs.

Aryee et. al (2003) provide a detailed overview of this licensing procedure, which begins with prospective licensees, who must be Ghanaian nationals aged eighteen years or older, submitting ten copies of a completed small-scale mining application form along with

accompanying site plans of the proposed mining area, to a local small-scale mining district centre. An inspection report is then forwarded to the District Chief Executive of the relevant political district. Following the issuance of an environmental permit from the Environmental Protection Agency (EPA) and payment of the required fees, the application is forwarded to the Minister of Mines for assessment. If approved, an agreement is forged between the applicant and the Government of Ghana, after which the signed documentation is taken to the Chief Inspectorate of Mines, who awards the official license to work on the allocated parcel of land. Licenses are subject to renewal after three to five years, depending on the concession size. The insertion of what many feel is an unnecessary Environmental Impact Assessment stage by the EPA has significantly delayed the process of issuing licenses.

With regards to the bureaucratic nature of the registration process, the results showed that out of thirty respondents that were interviewed, three of the respondents indicated that it takes a period of about one year to acquire a license. The respondents were asked whether the length of time played a role in the non-registration of their activities. This is what some of the respondents had to say:

The time involved is too long and this seriously deters us from registering.

Me I can't wait for one year to get a license while I keep on getting hungry while I know perfectly well that there is gold in the soil on which I live.

It takes too much time to acquire a license.

It takes too much time so we don't even waste our time.

Despite the fact that some of the responses that some respondents gave indicating that it took a year to acquire a license, which they believed was so long a period, seven of the

respondents indicated that it takes usually 6 months giving the impression that the time period that is usually needed to acquire a license was not long. They therefore highlighted the fact that it could not be a reason why they are not registering their activities. This is what a section of those respondents who fell within this category had to say:

No, six months is not too long a duration and therefore under no circumstance can it be a reason why we don't register.

I don't think three months doesn't take too much time.

It doesn't take long only if you follow all the procedures. But if you delay, the process will also delay.

It was surprising that the researcher had some information that was given by the official of the Minerals Commission that gave a contradictory view to that of the respondents. He claimed that it takes 91 days to get a concession registered. After having said that, he indicated that it was only possible to get one's concessions registered within the stated duration only if the individual goes through the process with all seriousness and that it could delay if the individual delays. The findings unearthed by the study, therefore, indicate that the length of time one has to wait in order to acquire a license is unreasonably long time and according to them it is a strong factor that deters them from registering with the Minerals Commission. This finding, therefore, supports the assertions that were made by some scholars in literature.

On the role of government officials, the GNA (2013) brings to the fore an interview by Hon Bossman Shiaman Jnr, that was granted to Okay FM where he is reported to have disclosed that the security personnel have completely swayed away from their line of duty and care only about making "loads" of cash from illegal mining activities. According to the GNA, (2013) he is reported to have indicated that policemen in his area had totally saturated the respect of the police service bestows on them and established questionable

relationship with the illegal miners. He is reported to have disclosed that the integrity of the police service has been tattered and galamsey operations have rather been booming in his district, Upper Denkyira East particularly in Dunkwa-On-Offin.

Far apart from the above highlighted issues, GNA (2013) brought to light that government officials has some interesting roles to play in the illegal mining activities. The source indicated that the Member of Parliament for Kwadaso, Dr. Owusu Afriyie Akoto alleged that Ministers of states and some DCEs were neck deep in galamsey operations in the country and is therefore proposing that ministers of state and DCEs ought to be investigated before they are entrusted with any responsibility to deal with the activities of illegal miners. He is reported to have gone ahead to state that the age long problem cannot be conquered unless top officials in positions of influenced are fished out and made to stop meddling in the illegal mining activities.

With reference to figure 5.1, it is evidently clear that there is an involvement of government officials regarding the reason why the illegal miners are not registering. This was made manifest when GNA (2013) issued a report that the DCE of the Upper Denkyira East District had been arrested for engaging himself in illegal mining operations.

In line with this, the empirical results derived from the field gave a clear indication that some government officials were found engaged in this illegal mining industry, thus confirming the argument that was made by literature. The respondents were asked whether government officials were engaged in the illegal mining activities. Fifteen respondents, when asked, gave the indication that government officials were not involved in the illegal mining activities while the remaining twelve indicated that government officials were

seriously involved either directly or indirectly. Out of the 12 respondents who made those allegations, nine of them pointed out that some of the government officials themselves had unregistered lands. Among some of the responses the respondents gave with regards to their unregistered lands were:

Most of the big men in government have some of the lands that are not registered so who are they to come and tell us to register.

They themselves have unregistered lands so it does not encourage us to register ours.

Some government officials have lands that are not registered which discourages us from registering because if our so-called leaders who are to set examples for us to follow are doing this, then what are supposed to do?

Some of the respondents who claimed some government officials were included in the illegal mining activities indicated some reasons different from the earlier stated one. They indicated some of government officials take bribes from the illegal miners. These are some of their responses to substantiate their claims:

Some of them are mostly aware but they are usually given some money so they don't mind us. (Illegal Miner, Kyekyewere: 28/04/2014).

Some of them at the district office take monies from us and promise not to allow some other officials to harass us. (Illegal Miner, Kyekyewere: 28/04/2014).

Security officials seemed to have a role to play in the illegal mining activities. GNA, (2013) brings to the fore an interview by Hon Bossman Shiaman Jnr, that was granted to Okay FM where he is reported to have disclosed that the security personnel have completely swayed away from their line of duty and care only about making “loads” of cash from illegal mining activities. According to the GNA, (2013) he is reported to have indicated that policemen in his area had totally saturated the respect of the police service bestows on them and established questionable relationship with the illegal miners. He is reported to have disclosed that the integrity of the police service has been tattered and

galamsey operations have rather been booming in his district, Upper Denkyira East particularly in Dunkwa-On-Offin.

In line with this, the empirical results showed that Twenty-five out of the 30 respondents indicated that security officials played serious roles in the reasons why most of them have their businesses unregistered. The common thing that runs consistently through the responses of the respondents was the issue of the collection of bribes. This is summary of some of the responses that some respondents gave to that effect:

They take monies from our bosses so that they alert us anytime time there is going to be an operation.

You see where the police barrier is? And you see where we are mining? Do you think that we don't know they are there? Or you think that they don't know we are working here? We know and understand our own language. They come violently to threaten us when we haven't given them something in a long while.

In spite of the responses that other respondents made suggesting that some security officials had a role to play, 5 of the respondents differed on that indicating that the security officials had no role to play, either directly or indirectly, in the illegal mining business. Therefore, to them, it was not a reason or a factor people will base on to justify the unregistering of the businesses. The results presented give a clear indication that there is a serious problem with bribe taking from security officials in the two selected communities because majority of the respondents showed consistency in their responses.

5.3 Economic Factors

The study looked at economic factors inhibiting miners from registering their operations. The study found out two reasons under this heading. The themes that were generated from the analyzed results are:

- Money required
- Availability of Market

Lack of working capital in any venture really causes a lot of problems. It creates so many problems especially when there is no capital to start the business and the individual involved is bent on still going into the business with or without the required amount to start the business. This encourages people to find illegal ways of entering into various businesses. Jenson (2013) also argued that there is always a difficulty in starting up a business when the capital is always on the high side. In this case, illegal miners find ways and means of engaging in their activities. Based on this preamble, responses were sought from the respondents on how economic factors inhibited the registration of their activities. The respondents were asked how much money was charged in order to get a concession registered. Out of the twenty-seven respondents that were interviewed, twenty-one of the respondents indicated that one needs between GHC 4,000 - GHC 5,000 in order to get a concession registered and a license acquired. It must be stated that only four of the respondents indicated that the amount of money that was needed to register a concession was GHC 3,000. It must be stated however that two of the respondents had no idea of how much money was involved in the registration of a concession and the acquisition of a license.

The twenty-one respondents were therefore asked whether the amount of money required to get a concession registered played a role in the non-registration of their activities. This is a summary of what the respondents had to say:

Eeeeei boss! The amount is not a small boys money oo. 50 million cedis. That's how we called it in the old currency. The amount even scares me. Where will I get this amount of money from?

Things are really hard these days ooo I can't pile 4,500 to go and pay to register a common concession.

If I had that huge money, I would have invested in a different venture. If I had money I won't be doing this business.

This, indeed, gives a clear picture of the role that the required amount of money needed to register a concession and acquire a license plays in the non-registration of their mining activities. This is evident in the responses the overwhelming majority of the respondents gave.

It was not surprising that the responses that came out from the Focus Group Discussions within the two communities showed that almost the same responses as was noticed during the one on one interviews. The group admitted that the money involved was so huge that it served as a deterrent for their non-registration. These are a few quotations from the Focus Group Discussions to that effect.

You don't really seem to understand some of these decisions. 40 million cedis!!! Well I don't have that money now. But if they say we should get that money before we can get a license they should not worry, we will pay when we get the money. But until then "man must chop"

Money is a problem to all of us. How can we pay this amount of money? How many years will I work and make this money.....even at all, what work will I do that will make me make about 40 million cedis? Then before we get that money, poverty would have killed us.

In the quest to find out the truth or otherwise of the allegations that the respondents made with regards to the amount involved in acquiring an operating license, the researcher interviewed officials of the various agencies, assemblies and departments that were in charge throughout the processes of the license acquisition. These are what they said about how much was charged at their various quarters:

At the Minerals Commission, you would have to pay a total of nine hundred cedis. One hundred cedis is for the payment of the application form, two hundred and fifty cedis as processing fee and

five hundred and fifty cedis as confederation fee. (Minerals Commission: Personal Interview, 2014)

At EPA, after everything you would have spent seven hundred and fifty five cedis there. The applicant will pick a form for five cedis after which seven hundred and fifty cedis will be paid after everything is successful. (Environmental Protection Agency: Personal Interview, 2014)

At the District Assembly, the documents go through processes which cost one thousand cedis. (District Assembly: Personal Interview, 2014)

There are several things we look at when they come to the lands commission. But in general, one can pay about seventy-five thousand cedis. (Lands Commission: Personal Interview, 2014)

The breakdown of monies that has to be paid at the various quarters before a license is acquired gives a clear indication that the allegations that were being made by the respondents are not so far from the truth. Indeed it is an unreasonably huge amount for an individual or a group of individuals who are into the illegal business due to lack of money. It therefore confirms the assertion in literature that huge sums of monies that required from the miners play a significant role to the non-registration of their activities.

The researcher again sought to find out who the respondents sell the minerals to. It was interesting to find out that all the twenty-seven respondents sold it to any buyer who readily had money and wanted to buy. Some of their responses are highlighted below:

As for me I sell to any individual who is interested in buying so far as the price that the person is offering is good.

Some companies advertise on radio and claim they give good prices so I look for those companies and I go and sell my gold there.

There are many buying companies so that's where I sell my gold, only if their offer is good.

Responses from this section gave a clear picture that the respondents have a huge problem with the amount of money that was needed to get a concession registered and a license acquired. Majority of them indicated that it was a major reason why they did not register. Most of them also sold their gold to anyone regardless of whether the person is a licensed buyer or not. They sold it to the buyer who offered more money.

It must however be stated that, literature indicates that it is illegal to sell gold to anyone apart from companies that are registered buyers. In the same vein, no one is supposed to buy gold from individuals who have not registered their companies. It is believed that the illegal miners are not registering because the illegal miners get people to buy their gold and that if serious measures are put in place to ensure that nobody buys gold from them, then they will be forced to register.

5.4 Socio-Cultural Factors

The study looked at the socio-cultural factors inhibiting miners from registering their operations. The study found out two reasons under this heading. The two themes that were generated from the analyzed results were:

- The role of the Chiefs
- The role of Environmental Education

Hilson (2001) postulates that the reason why artisanal mining is often deeply rooted is its link to influential traditional leaders. In Ghana, chiefs play important roles in the mining industry, overseeing compensation processes and spearheading negotiations concerning land transfers to companies. Perhaps even more importantly, despite mineral rights being vested in the presidency and chiefs playing no role in the approval of a mining concession, rural inhabitants see them as figures of authority. Thus, in areas that are relatively ‘un-

policed', chiefs stand to benefit financially from prospective miners by endorsing their illegal activities in exchange for a fee after which the artisanal miners are granted permission to operate. With the demise of GCD, however, customary land owners began not only to trespass, but also to trade mineral-rich (mainly company) lands to artisanal miners. Many chiefs also partnered with the mainly illegal artisanal miners (known locally as 'galamsey' miners) to work on the company-acquired lands for gold. Stephen Piedu, as reported by Afenyi Dadzie (2012) has argued that one of the surest ways to deal with the canker of illegal mining is to prosecute and jail chiefs who involve themselves in the illegal activities. According to Dadzie (2012), Mr. Piedu, who is a Chief Inspector at the Minerals Commission, inherently acknowledges the roles of the chiefs in the involvement of artisanal mining which has implications for which alternative income ventures are likely to succeed. In a larger context, therefore, their 'participation' in illegal mining makes it 'acceptable' in the communities.

GNA (2013) in an interview with Kofi Boateng, an illegal miner, has revealed that the current drive to flush out galamsey operators would yield no positive results if the root factors are not critically assessed. He is reported to have indicated that the arrest and prosecution of individuals engaged in illegal mining should not exempt traditional rulers who directly benefit from such activities. The same source reveals that Kofi Boateng said this at a public forum by saying "They should go to the chiefs who personally sold the land to individuals...and even some of the chiefs go ahead and take money from these people and tell them that they will reclaim the land which they do not. I have never heard the arrest of even on single chief on the issue of illegal mining."

In furtherance of this, the Okyehene, Osagyefo Amoatia Ofori Panyin, according to the GNA (2013) is reported to have called for the arrest and prosecution of any chief found culpable of masterminding any illegal mining activity in the country. He is quoted to have said this, “Any chief who is aware that it is illegal to do galamsey and still gives out land for such purposes must be arrested. This shows an inherent admission of the fact that chiefs are noted for giving out lands for these kinds of activities. GNA (2013) goes on to cite the MCE in the Upper Denkyira, Mr. Owusu Ashia advising cocoa farmers and chiefs in the area to desist from selling lands to illegal miners.

Irrespective of all the allegations that were made about the role of the chiefs with regards to illegal mining, the finding of this study shows that the chiefs do not engage in illegal mining not to even talk of them playing a role to inhibit the illegal miners from registering. It, therefore to a larger extent contradict what was put across in literature because the finds prove to the contrary. Even though majority of the respondents claimed the chiefs were aware of illegal mining in the communities, they do not involve themselves in it. Majority of the respondents supported the non-involvement of the chiefs with the fact that they have warned them on several occasions to put a stop to it but they refuse. These were some of the responses the respondents gave:

We still continue with our mining activities even though he has warned several times.

He is strongly against it and does not support it but we don't mind.

He has cautioned us on several occasions but we also can't stop because there are no jobs for us.

He fights seriously against it by issuing several warnings but now he has stopped. Am sure he is tired of us because we are still into it.

As for the chief dierrr, honestly sometimes he sends his gong beaters to make announcements encouraging people to stop.

It must be stated categorically that the major thing that deals with permanent change of behaviour is education. This is evidently made clear when Oduro-Mensah (2004) posits that education is the process of enhancing the development of certain knowledge, skills and attitudes in an individual to enable him or her become better identified with his or her community aspirations and contribute successfully towards the community's common goal, which is development. It is therefore assumed that when real Environmental Education is given to the target group (illegal miners), there will be a permanent change in behavior. Van Rooyen & Viljoen (2003) indicate that environmental literacy is educating the population to view and use the environment in a responsible manner and to behave in such a way that we leave an environment the same and even of better quality to our children.

The researcher therefore sought to find out whether authorities of the Minerals Commission or other authorities visit them. Twenty-one of the respondents admitted that authorities of the Minerals Commission visited them regularly while four of the respondents indicated that no authority from the Minerals Commission or from any other agency visited them for any reason.

In light of the above supposition, the researcher further asked the respondents, who gave responses to indicate that Minerals Commission officials come to visit, questions for them to indicate how often they come round to visit.

The majority of the respondents indicated that the officials of the Minerals Commission visit them once in a yearly. The remaining respondents had different views to express. Four of them were of view that the officials of the Minerals Commission visited them on a

quarterly basis while three of them differed from what all the other twenty respondents had said by saying that they visit once in two years.

Due to the fact that majority of the respondents acknowledged the fact that officials of the Minerals Commission usually come around to visit them, the researcher sought to find out whether the officials who visit the respondents from the Minerals Commission give them some form of education with regards to the reasons or the need for which they have to register their activities. All respondent agreed that there is a policy on mining in Ghana but had no knowledge with reference to the content of the policy. It could be said that inadequate knowledge on mining laws is a contributing factor to illegal mining because all the twenty-seven respondents indicated that the officials do not give them any form of education on the importance on why they have to get their activities registered.

The researcher sought to find out from the respondents the various things that the officials of the Minerals Commission come to do in the communities if not to educate them on the importance on registering their activities. Some of the reasons that they gave are highlighted below:

Those people don't mind them. They just come and walk around so that people can just see that they have come. They don't come to do any serious education.

As for me from the time I started doing illegal mining, they have not come that they are coming to educate us before so I don't know what you mean by 'they come to educate us?'

In addition, respondents were asked what they think could be done to enable them understudy mining policy. They reiterated that education on mining laws was a way by which they can understand and abide by mining policy. In this regard, all respondents had a view that if they are educated on mining policy, it will go a long way to help them register their activities. This is a summary of what the respondents had to say:

If they want us to register our operations, then they have to tell us what must be done and reasons why we need to register.

There is nothing that guides our activity. Besides, that is sole means of livelihood for us. We can stop this operation. The only thing is for them to come tell us what the mining policy means.

The researcher, upon verifying the truth or otherwise of what the respondents said, interviewed an official of the Minerals Commission. In the interview, he made it clear that it is not true they do not visit them to give them education. He said what it was is that, anytime they go to give the education, the miners do not show up and that they have reduced how often they visit them to educate them. He totally rubbished the idea of bribe taking. Therefore, real education, as Oduro-Mensah (2004) highlighted has not been reached with respect to the education that the illegal miners need.

5.5 Non-Participation in Policy Formulation

It must be stated that participation is important as communities with high levels of participation have greater trust, lower crime levels, better health and they vote more often (Porritt 2007). It has been suggested that people are choosing to disengage from public participation because they feel there are more effective ways to make a difference in their communities (Ockenden 2007). It is interesting to note that 37% of people who claimed they did not vote in elections were members of ,or active in, a community group, a charity, a campaigning organization or a public body (Power Inquiry 2006).

The empirical results of the study, which were confirmed by literature, showed that all the respondents were not included in the formulation of mining policies at all stages be it the district level, regional level and national level. According to Arnstein's ladder of participation, if an individual or a group of individuals fall either within "manipulation and therapy, then there is not even an iota of participation at all. It was interesting to note that

the respondents fell within those categories and for which reason they indicated their non-involvement in policy formulation. However, they were of the view that if they participate in policy formulation, it will help them to understand all dimensions of mining policy and besides since they have a clue about the policy, it will prompt them to register their operation. Comments from the respondents were:

Don't take us for anything. Am telling you the truth, if we are involve in all this process, then there wouldn't be anything called illegal mining in Ghana.

It will be wise to include us in every discussion regarding mining because we also participate in contributing to the development of Ghana.

The comments from the respondents attest that the nature of community non-participation in policy formulation is important in arresting the social canker that has bedeviled communities. It can therefore be said that community participation in policy formulation is an important tool when it comes to licensing of operations since it will pave way to their own decision.

This was confirmed by the two Focus Group Discussions that the researcher conducted for the respondents. The agreement the group came to came in as a confirmation to what the respondents who went through the one on one interview said. The group was asked if they were involved in policy formulation. It was interesting to note that the members of the group unanimously said no. The researcher further sought to find out whether their non-participation in policy formulation inhibits their registration. This is what came out of the Focus Group Discussion at Dunkwa on Offin:

Don't mind them. Anytime they want to do something, they think that we are nobody so they don't ask us anything. If they think that they can do anything without us, then it means we can also do our

jobs without them...if they want the trouble to reduce, the they should sit and discuss issues with us.

In furtherance of this, the Focus Group Discussion that was conducted by the researcher at Kyekyewere had participants confirming the discussions that were made in relation to whether non-participation in policy formulation inhibits decision not to register. The group admitted that they did not partake in policy formulation. They indicated how this inhibits their registration. This was the key conclusion that the group came to:

Some of us want our voices to be heard. If they are able to come down to our level and understand us, the issue would not be getting out of hand. There has to be a dialogue because it seems as if we don't understand them and they also don't understand us. So we believe when our voices are heard and considered, it is possible we might register.

5.6 Conclusion

Factors inhibiting people from registering with the Minerals Commission have been looked at as separate entities as shown in the discussion of the study. This therefore makes it prudent to look at these factors a unified whole.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter focuses on the summary, conclusion and recommendations of the study. The summary relates to the introductory chapter, review of related literature, methodology, presentation of results, and major findings derived from the study. The recommendations were also made based on the major findings of the study and the conclusions drawn. Implications of the findings for adult education policy and practice as well as suggestions for future studies can also be found in this chapter.

6.2 Summary of the Study

Illegal mining has been with us since time immemorial but it has been a point of concern in recent times due to the rate at which it is occurring and the negative effects they bring. Ghana News Agency (2013) issued a statement in which an official of Minerals Commission is reported to have stated that only 20% of operators engaged in small-scale mining activities in the Upper Denkyira East District are operating within the confines of the law. This gives a clear indication that the remaining 80% of the mining operators are engaging in the activities through the illegal procedure. This brings about three major concerns.

First, due to the nature of illegal mining, it gives little or no room for government to regulate their activities which inevitably leads to environmental degradation which manifests itself especially in the form of pollution of water bodies. Secondly, there is an indication from the Minerals Commission that the government gains a huge percentage of revenue from the small scale mining sector. If it turns out that about 80% of those engaged

in these practices are not registered by the Minerals Commission, then indeed, it stands to reason that apart from the high risk of accidents or deaths that these illegal miners are prone to, the government is also losing a lot of revenue from the activities of these unregistered illegal miners. Thirdly, apart from the financial resources that the nation loses, it also loses its human resources due to the dangers with which their activities are characterized. Various scholars such as Aryee et.al (2003), Ocansey (2013) just to mention but a few, have written extensively on environmental degradation with particular emphasis on illegal mining. However, too much attention has been given to the negative effects of the activities of these illegal small scale miners on the environment.

It is therefore incomprehensible that despite the three major concerns highlighted in preceding paragraphs, the activities of these illegal miners seems to rather be on the increase. This presupposes that there are reasons discouraging the illegal miners from registering with the Minerals Commission. Until these reasons are found out and attended to, this menace of illegal miners causing damage to our environment, depriving the nation of huge revenue and destroying the human resource will continue to extensively hinder the development of the nation. On the basis of the above supposition, the question to be answered then is: what are the factors that are inhibiting illegal miners from registering with the Minerals Commission?

The study was designed to meet the following objectives which are to:

1. Discover the factors that inhibit illegal miners from registering with the Minerals Commission in relation to political factors.
2. Identify the factors that inhibit illegal miners from registering with the Minerals Commission with regards to economic factors

3. Find out the socio-cultural factors that inhibit illegal miners from registering with the Minerals Commission.
4. Find out the extent to which non-participation in policy formulation could inhibit the illegal miners from registering.

Based on the objectives that this study sought to achieve, the symbolic interaction theory, by Blumer, was adopted. The study also reviewed literature on the historical development of mining in Ghana, history of mining regulation in the early 1900s, current mining regulation in Ghana, the operating environment of small scale mining, approaches adopted to discourage illegal mining in Ghana, factors affecting registration of illegal miners

The research design used for this study was explorative case study. The population for the study was all illegal miners in the Upper Denkyira East District. Due to the homogeneity of the group, the researcher selected two towns and the respondents through the adoption of the purposive and convenient sampling techniques. The researcher chose twenty-two (22) respondents, eleven (11) from each town, had one (1) focus group from each community made up of eleven (11) members in each group. Officials of various agencies that play a role in the registration process were also interviewed. The two instruments that were used to solicit responses from the respondents are the one-on-one interview schedules and a Focus Group Guide.

The study presented data in line with the research objectives and questions. Data collected and analyzed were discussed in line with the research objectives, research questions, theoretical framework and review of related literature. Finally, the study summarized the entire study, major findings presented, recommendations drawn and its implications to

Adult Education policy and practice in the field of community education and development.

Areas for further study can also be found in this study.

6.3 Major Findings of the Study

The study revealed the following findings under the following objectives:

- Political Factors
- Economic Factors
- Socio-Cultural Factors
- Non Participation in Policy Formulation

6.3.1 Political Factors

The study revealed the following findings under political factors:

- Majority of the respondents had a problem with the bureaucratic nature of the process an individual has to go through in order to acquire an operating license. This, they thought was a massive waste of time.
- The respondents had a problem with the role of security personnel as they were accused of bribe taking. This was because they were of the view bribes could be paid to them so that they could go about freely with their activities.
- Corrupt government officials too seemed to have been a major factor inhibiting the illegal miners from not registering with the Minerals Commission. The respondents indicated that some government officials were also part of the activities so they do not find the need to register theirs.

- The study also identified that the size of land that was needed to register a concession was also a major problem.

6.3.2 Economic Factors

The study revealed the following findings under economic factors:

- The huge amount of money that is needed to get a concession registered was identified as a major problem.
- Availability of ready market is also a major finding that this study brought out.

6.3.3 Socio-Cultural Factors

The study revealed only one finding under Socio-Cultural factors:

- Lack of Environmental Education in the two communities was identified as a factor of non-registration.

6.3.4 Non-Participation in Policy Formulation

The study revealed that there was a problem with participation in policy formulation at the various levels. Majority of the respondents were worried because they were not involved in anything. The study therefore identified non-involvement in policy formulation as a factor affecting their registration.

6.4 Implication to Adult Education Policy and Practice

Efforts have been increasing to document the mechanisms by which certain countries have been more successful in achieving socio-economic development through the exploitation

of non-renewable resources. The proponents of these efforts argue that if managed wisely, mining can be a viable and rewarding strategy, particularly as an economic jumpstart. In line with this, the World Bank first attempted to demonstrate this by pointing to poverty alleviation, job creation, and infrastructural development, using resource-rich developed countries as examples of successes in mining (Kumah, 2006). They maintained that the “quality and competency” of a country’s institutional structures could determine whether mining revenues would promote or impede development in that country (Pegg, 2006). Additionally, the report stated that social, environmental, and poverty alleviation must be explicitly stated goals, equal to the goal of economic growth (Pegg, 2006).

Meanwhile, government’s organizations, non-governmental organizations, pressure groups and the media have been increasingly drawing attention to environmental incidents related to mining. Particular attention has been paid to the string of environmental catastrophes that have occurred in the developing world as a result of cyanide use in gold mining (Kumah, 2006). All this occurrences have been attributed to non-registration of mining activities especially in developing countries. This is not different in Ghana as many small scale miners have not registered their operations. This is represented by the statistics from the Minerals Commission of Ghana which indicated that as much as 80% of mining operations of small scale mining are not registered while the remaining 20% is registered. This becomes a worrying situation which is not dealt with will further lead to total catastrophe which is already taken place at a fast pace. Based on this, adult education becomes imperative as it will help minimize the impending danger when it comes to mining.

The adult education process drives towards the achievement of the capability to individually use reason on the subject matter in question. Adult education is oriented at the use, at any age, of attitudes and skills prone to clarifying any distortions in communication, favouring “why,” “how,” “when” and “where” as well as the “what for” in all situations.

Adult education affirms that:

Civic, political, trade union and co-operative education activities should be aimed particularly towards developing independent and critical judgment and implanting or enhancing the abilities required by each individual in order to cope with changes affecting living and working conditions, by effective participation in the management of social affairs at every level of the decision making process. (UNESCO, 2011)

It can be deduced that if miners are given the necessary education, it will foster or pave the way for critical analysis to determine their actions. This is in line with what the study found out, that miners in the Dunkwa on Offin as well as Kyekyewere do not have much knowledge on their actions. This leads to questions which are in folds. It therefore becomes prudent that coming communities are educated on the process of registration and a better and improved way of mining. This has policy implications. This is due to the fact that the process of achieving adulthood, we must perform the following actions: investigate, reflect, report, decide, receive information and organize it, plan, ask and study. These actions help to acquire truthful and quality knowledge; to define the strategies and adjust them to reality; focus new options or offer alternative explanations to the information; and to unmask any distortions and deformations. Academic institutions also hold the potential to foster improvements in the extractive industries. Research, training for future industry professionals, and partnerships with stakeholders such as the Sustainability Working Group can help to bring about positive change.

Despite the efforts that have just been outlined, the debate surrounding sustainability in the extractive industries continues. Many maintain that the apparent increase in concern over sustainability by corporations is not enough and the impact on communities is simply too great. Another study concluded that much more progress must be made before gold mining, in particular, of which can be deemed sustainable, "...as long as mining continues to displace people, disrupt social organization, cause sudden loss of livelihoods, and loss of access to public services it cannot be considered sustainable (Kumah, 2006)." Still, it is clear that some progress has been made, and the potential for continued improved management of non-renewable resources exists, regardless of the setbacks of the past. However, there are still environmental, economic, and social challenges associated with the exploitation of natural resource wealth which requires continued attention. One specific area that could benefit from more research and action is the level of support provided to mining communities for economic diversification and planning for mine closure. Additional improvements in transparency, governance, legislation, and economic policy could also hold keys to unlocking resource wealth which can truly foster genuine and sustainable development. Strengthened taxation regimes, strict fines for environmental damage, increasing requirements for reporting of social and environmental performance can all potentially increase the benefits of natural resource wealth.

Although governance and institutional structures in developing countries are often weak, when mining, long term success can be achieved if education is strengthened in all areas in relation to process of registration of mining activities and reasons on the need for registration for mining operations. Also, Innovative partnerships between companies, governments, and civil society organizations can help build the capacity of local and regional public agencies to responsibly deal with the issue of unregistered mining

activities, while national and international level partnerships can potentially bolster commitments to transparency and environmental performance.

To this end, the district assemblies should design and incorporate training programmes into their activities for procedures in registering of mining activities. This will go a long way to make increase commitment of miners to announce their legal rights to mine. This is line with pillars of education as stated by UNESCO which states that “education help us to know and to do”. The statement affirms that if miners are educated and they get the knowledge with reference to their operations, they will do which is means that they will register their operations.

6.5 Conclusion

The study revealed some factors that were inhibiting the illegal miners from registering with the Minerals Commission. With regards to the political factors, majority of the respondents pointed to the bureaucratic administrative procedures, corrupt security officials and government officials. These things according to them really served as a deterrent to their decision not to register. With respect of the economic factors, the study revealed that the amount involve to get a concession registered was too much. Again, the size of land too was too huge. The final thing that came up under the economic factors was the fact that the illegal miners did not want to register because there were people available who were ready to buy their gold. Socio-Cultural factors and non-participation in policy formulation gave results that showed that there was a serious lack of Environmental Education and serious non-participation in policy formulation respectively and they were clear factors of non-registration. In this regard, it can be concluded that if serious checks are put in place to minimize these things, there will be an increase in the registration population.

6.6 Recommendations

Based on the findings of this study, recommendations ought to be made to various MMDA's in order to see how best the issue of illegal mining can be solved or reduced drastically. Some of the recommendations are as follows:

6.6.1 Political Factors

On the political factors that inhibit illegal miners from registering with the Minerals Commission of Ghana, it is recommended that:

1. Authorities who are responsible for the administrative procedures of registration are to check and find ways and means of making the procedures as simple as possible to avoid non-registration since it was identified as one of the major factors assigned to non-registration of mining activities.
2. Serious discipline and ethical values should be put in the security agencies so that with their discipline, they will avoid the issue of bribe taking. With this commitment, it will encourage them to discharge their duties with integrity. The study therefore recommends that the Ghana Police Service should put in place measures to ensure that those who will be caught are dealt with severely.

6.6.2 Economic Factors

On the economic factors that inhibit illegal miners from registering with the Minerals Commission of Ghana, it is recommended that:

1. Authorities who are in-charge of determining how much money is to be paid and the size of land required, should be reduced drastically to a reasonable requirement to ensure that as many illegal miners as possible get their concessions registered.

6.6.3 Socio-Cultural Factors

On socio-cultural factors that inhibit illegal miners from registering with the Minerals Commission of Ghana, it is recommended that:

1. The study again recommends that Environmental Education should not be underestimated and that it should be given to the target group as often as possible. This will only be possible only when all the agencies in charge of mining in Ghana, like the Minerals Commission, Lands Commission, Environmental Protection Agencies etc. are up and doing to really give serious Environmental Education.

6.6.4 Non-Participation in Policy Formulation

On political factors that inhibit illegal miners from registering with the Minerals Commission of Ghana, it is recommended that:

1. There should be involvement of the illegal miners during policy formulation at the various levels to be able to get several views in order to prioritize them and select the best ones to be put into law. This can be achieved if frequent meetings are held with them to get to reach a consensus before it is put in policy.

6.7 Areas for Further Studies

At the end of this study, the following areas are suggested for further studies:

- Assessment of registration process on mining in Ghana
- Evaluating mining laws and policies in Ghana

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APPENDIX A
UNIVERSITY OF GHANA, LEGON
INSTITUTE OF CONTINUING AND DISTANCE EDUCATION
INTERVIEW SCHEDULE FOR UNREGISTERED ILLEGAL MINERS IN THE
UPPER DENKYIRA EAST DISTRICT IN THE CENTRAL REGION

As part of my work towards fulfilling the requirement for the award of a Master of Philosophy degree in Adult Education, at the University of Ghana, Legon, I am undertaking a research on “ factors Inhibiting Illegal Miners in the Upper Denkyira East District in the Central Region from Registering with the Minerals Commission in Ghana”. Please, this research is solely for academic purpose therefore, you are encouraged to answer the questions as frankly as possible. Your responses would be held in strict confidence.

Thank you.

SECTION A: DEMOGRAPHIC CHARACTERISTICS

1. Age

- a. 18-25 []
- b. 26-30 []
- c. 31-35 []
- d. 36-40 []
- e. 41-45 []
- f. 46+ []

2. Sex

- a. Male []
- b. Female []

3. Educational Level

- i. No school []
- ii. Basic Education []
- iii. S.H.S []
- iv. Tertiary []

SECTION B: POLITICAL FACTORS

4. Are you aware that there is an institution that is in charge of small scale mining in Ghana?

a. Yes []

b. No []

5. Do you happen to know the exact functions of the Minerals Commission?

a. Yes []

b. No []

6. If yes, what are some of the functions of the Minerals Commission?

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7. Would you say that illegal mining is good or bad? Please give reasons.

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8. Are you aware that you are to go through the appropriate processes and register with the appropriate authorities?

a. Yes []

b. No []

c. Not sure []

9. Are you sometimes harassed by security personnel?

a. Yes []

b. No []

10. If yes, why do you think they do?

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11. Are you aware that there are laws governing mining in Ghana?

a. Yes []

b. No []

12. If yes, what are some of the policies or laws you are aware of?

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13. Are you conversant with the administrative procedures one has to go through before registering?

a. Yes []

b. No []

14. How long does it usually take to acquire a license?

- a. Within 3 months []
- b. Within 6 months []
- c. Within 1 year []
- d. Within 2 years []

15. What size of land is needed before a license is secured?

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16. Do government officials at the various levels have some roles to play in the illegal mining activities that deter you from registering?

- a. Yes []
- b. No []

17. If yes, what roles to they play?

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18. Do security officials and or agencies help in you not registering with the Minerals Commission?

- a. Yes []
- b. No []

19. If yes, what roles do they play?

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SECTION C: ECONOMIC FACTORS

20. How much money is required in order to register a concession?

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21. Who do you sell the minerals to?

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SECTION D: SOCIO-CULTURAL FACTORS

22. How do you acquire land for your illegal mining activities?

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23. Do chiefs play any role with regards to the non registration of your illegal mining activities?

- a. Yes []
- b. No []

24. If yes, what roles do they play?

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25. Is the chief aware of your illegal mining activities?

- a. Yes []
- b. No []
- c. Not Sure []

26. If he is aware of the illegal mining activities, what is his reaction towards it?

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27. Do authorities of the Minerals Commission or other authorities visit you?

- a. Yes []
- b. No []

28. If yes, how often do they visit?

- a. Weekly []
- b. Monthly []
- c. Quarterly []
- d. Yearly []
- e. Biennially []

29 If you answered ‘yes’ to question 27, do they educate you on the reasons why you have to register?

a. Yes []

b. No []

SECTION E: NON-PARTICIPATION IN POLICY FORMULATION

30 Do authorities involve you in policy formulation?

a. Yes []

b. No []

31 How does your response to question 30 influence your decision to either register with the authorities or not?

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APPENDIX B
UNIVERSITY OF GHANA, LEGON
INSTITUTE OF CONTINUING AND DISTANCE EDUCATION
FOCUS GROUP GUIDE FOR UNREGISTERED ILLEGAL MINERS IN THE
UPPER DENKYIRA EAST DISTRICT IN THE CENTRAL REGION

As part of my work towards fulfilling the requirement for the award of a Master of Philosophy degree in Adult Education, at the University of Ghana, Legon, I am undertaking a research on “Factors Inhibiting Illegal Miners in the Upper Denkyira East District in the Central Region from Registering with the Minerals Commission in Ghana”. Please, this research is solely for academic purpose therefore, you are encouraged to answer the questions as frankly as possible. Your responses would be held in strict confidence.

Thank you.

- a. What roles/ functions does the Minerals Commission play?
- b. What laws governing mining in Ghana?
- c. What are the procedures one has to go through before registering?
- d. What problems exist with issuing of license?
- e. What roles do government officials at the various levels play in the illegal mining activities?
- f. How do these roles deter illegal miners from registering with the Minerals Commission?
- g. How do security officials and or agencies help in people not registering with the Minerals Commission?
- h. How do illegal miners acquire land for the illegal mining activities?
- i. What roles do chiefs play with regards to the non-registration of your illegal mining activities?
- j. How does non-participation in policy formulation influence decision not to register with the Minerals Commission of Ghana?