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**SOCIO-ECONOMIC IMPACT OF LOGGING  
ACTIVITY IN FANTEAKWA DISTRICT**

**BY**

**FOSTER BOAKYE- GYAN**



**THIS DISSERTATION IS SUBMITTED TO THE  
UNIVERSITY OF GHANA, LEGON IN PARTIAL  
FULFILMENT OF THE REQUIREMENT FOR THE  
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## DECLARATION

I here by declare that this dissertation is my original work except for references to other people's work which I have duly acknowledged. My supervisor has being Dr. Kwadwo Appiah-Kubi of the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana; however I am solely responsible for the content of this study



.....

**FOSTER BOAKYE-GYAN**                      **DR. KWADWO APPIAH-KUBI**  
**(STUDENT)**                                      **(SUPERVISOR)**



## DEDICATION

I dedicate this to my dear Mum Madam Gina Amma Akoma, who had to squeeze water from an empty bucket and loving siblings Gertrude Ofusua-Gyan, Alex Brobbey-Gyan, Francisca Ampofoa-Gyan and Ernest Doku-Gyan for believing in me.



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To my working colleagues at LillyRose Pharmacy Ltd., and my classmates particularly Sylvester, Ekow and Toni, I express my utmost and profound gratitude. For Francis Edusah, I wish him a perfect rest in the bosom of the Almighty.

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Finally, I thank the *MOST HIGH GOD* for this wonderful opportunity.

## ABSTRACT

The subject matter of this study was to assess the impact of logging activities on the socio-economic development of the people of Fantekwa District in the Eastern Region of Ghana. The study was carried out in three selected communities within the district, namely, Begoro, Akwansremu and Beseboum. These communities were selected because the logging activity has been consistent over the years and more so, the inhabitants of these communities have on several occasions shown their disapproval to the logging practices going on in the district.

The primary aim of the study was to find out the extent to which the logging activities by logging firms operating in the district have affected the socio-economic development.

Primary data were collected from the three communities by randomly selecting one hundred respondents from hundred households. The data was collected through personal interviews guided by structured questionnaire as well as discussions with relevant institutions and stakeholders. Both univariate and bivariate as well as descriptive statistics were used to analyse the data.

The study revealed that though the logging activity has brought some improvements such as the construction of access roads by timber firms, construction of school buildings and revenue to the District Assembly for the development of the district, it was found that the activity has not really help the

people. These problems include the destruction of farms without due compensation, forest encroachment mostly by migrant settlers whose activities are enhanced by the access roads created by the timber firms, deforestation especially in the off-forest reserve and the rising activities of illegal chainsaw operators due to lack of alternative employment opportunities.

Though the impact of logging activity on socio-economic development of respondents was difficult to assess in a short-term study such as this, it was identified that the most affected groups of people included indigenous farmers who have been farming in the off-forest reserve for over ten years and hunters.

The expectations expressed by different groups concerning logging in the district were observed to be varied. While farmers in Begoro and Beseboun expected timber firms to embark on sustainable afforestation programme, those in Akwanserem expected the timber firms to increase their investment in the provision of socio-economic amenities in the affected communities. While total ban on logging was advocated by hunters, chainsaw operators called for the lifting of the ban on chainsaw operation.

The study recommends a strong and effective collaboration among all institutions involved in forest management and the community not only for sustainable timber exploitation but also for the socio-economic development of the local people.

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**LIST OF ACRONYMS**

<b>DFS</b>	District Forest Service
<b>ERP</b>	Economic Recovery Programme
<b>FAO</b>	Food and Agricultural Organisation
<b>GDP</b>	Gross Domestic Product
<b>GSS</b>	Ghana Statistical Service
<b>ISSER</b>	Institute of Statistical, Social and Economic Research
<b>ITTO</b>	International Timber Trade Organisation
<b>LI</b>	Legislative Instrument
<b>NGO's</b>	Non-Governmental Organisations

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Forest provides a wide range of benefits to people at community, national and global levels, which include provision of shelter and sanctuary for wildlife, protecting watersheds for water supply, cleansing the air, preventing soil erosion and serving as source of wild food and medicinal needs.

However, the challenge of economic growth and development coupled with the ever increasing population growth, especially, in developing countries have stood counter to the need to conserve the forest. Today, logging and its related activities are carried out on commercial basis. Logging activity is seen as being a double edge knife, in that, it has both negative and positive impacts on the socio-economic life of the local people, hence the concern of International Institutions, Government, Non-Governmental Organizations, Communities and Individuals.

According to an FAO Report (2000), logging contributes positively in diverse ways to the socio-economic development of the rural folks. Among the positive impacts or effect of logging activity is the creation of employment to rural folks who live in the activity area. In Ghana, it is believed that logging directly employs about 70,000 people whilst about 2.5 million also depend on forestry and logging for their livelihood (Kumi, 1998).

Aside, job creation, revenue is generated from the activity through imposition of taxes and royalties on timber companies. These are paid to the affected communities or stool or skin lands through the government. The funds received often serve as a means for embarking on developmental projects such as electrification, provision of social amenities like potable water, sanitation, building of schools, clinics and others to improve the living standards of the inhabitants.

It is also observed that logging serve as a major source of foreign exchange earner to the governments of developing countries especially those in the tropical rainforest such as Indonesia. In 2000 Ghana's foreign exchange earning for timber exports was \$175.2 million, accounting for 3.5 percent of Gross Domestic Product and about 10 percent of merchandise export (ISSER, 1999 and 2000).

In spite of the positive contribution to social life, researchers trained in social development, anthropology, development planning, ecology, NGOs and affected communities decry the operation of logging activities due to its negative socio-economic and environmental consequences.

The destruction of farmland or cultivated land without appreciable compensation to farmers is one negative impact of logging. This problem is very peculiar to timber companies and illegal chain-saw operators operating in the off-forest

reserve areas. The result of this destruction of farmlands manifest in low harvest and food shortages, which results in starvation and poverty to the rural people especially women who engage in crop farming.

Another common negative feature of logging is the haphazard and unsustainable manner in which it is carried out. Current report in the media, especially in newspaper columns and radio and television news items and documentaries have shown that, many rural folks in forest regions face perennial water shortages as a result of the destruction of trees from the headwaters of streams, which supply water to the people hence, the drying up sources of water.(Mathers,1990)

Logging has served as bone of contention in many places, resulting in serious conflict and chaotic circumstances between local folks and timber firms. As a result of the latter's continual destruction of the forest without appreciable monetary compensation, non establishment of small scale sawmills, non embarking of afforestation or fulfillment of social responsibility agreement which are normally signed by the parties involved.

## **1.2 Problem Statement**

Commercial logging in the Fanteakwa District dates back in the 1960s, serving as an important source of revenue generation through the collection of taxes and royalties. Other benefits take the form of road construction, employment creation

and infrastructure development. In spite of the socio-economic benefits there have been numerous complaints about destruction of farmland, failure to grant suitable compensation to affected farmers and the lack of desire on the part of timber firms to invest in small scale businesses to improve the livelihood of the people. Current reportage made in the Ghanaian media and reports from the District Forestry Service on the logging activity in the district indicate that there have been various group riots and demonstrations in connection with the activity resulting in the destruction of property worth millions of cedis.

These developments raise a lot of mind-boggling questions. Why do people demonstrate against the logging activity in the district? Does logging have any socio-economic impact on the lives of people in the district? Could it be the failure of the timber firms operating in the district not making suitable compensations to residents who are affected? Perhaps there has been a lack of effective communication or understanding between the companies and the people to regulate the activity for the benefit of the two parties.

### **1.3 Objectives of the Study**

The objective of the study was to examine effects of logging on socio-economic life of people in the Fantekwa District. The specific objectives were to find out:

- (a) Conditions or circumstances under which logging are undertaken in the District;

- (b) Provisions made towards the development of the local economy by Timber Companies operating in the area; and
- (c) How effective state policies and legislation concerning sustainable environmental management have been effective in controlling forest degradation.

#### **1.4 Rationale for the Study**

Since every activity carried out in space has both positive and negative effects on people in a given environment, it is prudent to assess whether to pursue logging in Fanteakwa District against the background of the criticisms leveled against timber operators for causing deforestation and failing to replenish the forest. This study is carried out to inform policy makers towards arresting the adverse effects of logging activities in the area.

#### **1.5 Literature Review**

Logging activities can be traced as far back as the 16<sup>th</sup> Century when samples of *Lophira alata* (Ekki or Kako) were sent to England. According to Chryssides (1974) organised commercial logging (timber harvesting) in Ghana (Gold Coast) started in 1888 and was restricted to the exploitation of only Mahogany. Logging in the early days concentrated along the banks of big rivers in the Western Region. The rivers were used to transport logs down to the port in Half-Assini and Axim en route England.

By 1900 logging and log exports almost ceased because timber along the vicinity of the big rivers had been exhausted. The logging activity or timber industry achieved new impulse as the famous politician and businessman Paa Grant revived the declined timber trade by establishing business contacts in North America and England (Ofosu Appiah, 1964).

More labour or manpower was employed with little mechanization. The labour was tasked to drag logs on rollers to rivers and motor launches were used to tow logs on Rivers, Ankobra and Pra respectively in the Western Region. Between 1947 and 1955, logging activities increased due to the use of tractors for mechanical extraction. Expansion of road-network and, use of heavy trucks, also contributed to the increased volume of logging activities.

In a study undertaken in Ghana in 1993, Hogg (1993), found a sharp increase in logging in the post independence era of Ghana especially with the inception of the Economic Recovery Programme (ERP) in the early 1980s with its attendant effects,

Barbier and Burgess (1994), arguing for logging and against timber boycott emphasizes that forest must be used if it is to be saved. That is, in the tropics as elsewhere, forest must not compete with other land uses or remain wood. A boycott of timber on any other grounds would reduce demand and depress forest

product prices. This would reduce net returns for forestry investments and make sustainable timber management, pre-requisite for stabilization of forest areas in the tropics less feasible.

Wackerman (1966) has also observed some services that logging companies offer people within their operational environs. He observed that logging companies organise capacity building programme for their workers and establish school for both workers' children and the communities in which they operate. Many at times incentives are given to people in the affected areas to encourage participation in formal education most regarded for skills acquisition for employable jobs other than depending directly on the forest for survival or livelihood.

In Indonesia as a whole, an unofficial estimate puts forestry and timber logging employment as high as 3.7 million supporting about 15 million people as dependents (Brookfield et al, 1995). The activity has given members of the local population the opportunity to improve their income earnings, which is even more than double, the income from the sale of non-timber products such as snails, mushroom and hunting. With the inception of logging activity in a community, local small-scale sawmill springs up which process the logs into boards, veneers and lumber and also other firms, which contribute, to the local building and construction industry.

A Food and Agricultural Organisation (FAO) survey showed that forest based activities especially logging in addition to providing employment serve as a means of generating revenue and income for the local people. For instance average salaries for labour in Peru, Nepal and other study areas were found to be higher than other unskilled work, averaging approximately 50 percent more than those for agricultural labour (FAO, 1981).

Notwithstanding the these positive effects of logging activities, there is a general outcry of logging practices in the tropical rain forest especially its negative impact on the socio-economic development of the local people. Research evidence and studies on logging in some countries and proved that there are a lot of negative consequences. These include deforestation and loss of bio-diversity, pollution of water bodies, destruction of farmland causing food insecurity, non-investment and promotion of conflict, enhancing influx of migrants and population pressure, inducing forest encroachment and illegal activities and destruction of eco-tourism and culture.

John (1989) studies on the effects of logging in Malaysia indicate that logging endangers animal especially herbivorous and carnivorous which are of critical importance to the survival of rural population. Studies also undertaken by Costa Filho (1991) on logging practices in Surinam and Brazilian Amazon indicate that the use of heavy machines such as tractors, wenchers, jacks, heavy trucks and

skidders in logging clearly damage the landscape and is inconsistent with the preservation of many residual trees and other non-timber forest products. For him, logging companies do not pay for the full cost of such destruction to the local community. The result is that more products are consumed than it is economically and rationally justifiable. According to FAO, (1996) the cause of genetic erosion in tropical forest is the wanton destruction by commercial loggers and its associated activities. The result is extensive canopy opening combined with the creation of many dead trees and makes logged forest vulnerable to encroaching fire, which in turn destroys fauna, and flora species, which the local people depend on for survival.

Kumar (1986) observed in his study of logging impact in Sarawak, Malaysia that, the system of selective logging cause a great damage to residual trees and often destroyed cultivated lands. The situation indirectly causes food insecurity to the majority of local people who depend on about 75 percent to 80 percent of their livelihood on their farms (FAO, 2000).

According to Kotey and Mayer (1998) farmers do not or if any receive a little compensation from the destruction of their farms by timber logging companies in Ghana. The destruction of farmland mainly affects food crops producers, who are often denied suitable compensation for the destruction of their farms.

A growing concern is the negative impact of social conflict that the logging activities bring between the local people and the logging companies. In most

cases properties of the timber companies are destroyed whilst arrests are often made by security officials. These result as a result of timber companies failing to replenish degraded forest resources or falling to pay suitable compensation to the affected. For instance, in Cameroon in 1993 conflict between communities and transnational logging companies erupted as a result of the destruction of their farms and non-investment in social development, there were incidences of kidnapping expatriate personnel's of logging companies and blockading logging roads by villagers. The results increased tension, confrontation, which usually end up in destruction of property and loss of lives and also situation where some of the villagers are rounded up and imprisoned (FAO, 1996).

A similar incident occurred in Sarawak, Malaysia between 1987 and 1989, where a serious conflict broke out between the local people on one hand and the logging companies supported by the government on the other hand for overexploitation of timber and non-investment in the local economy. Properties worth's millions of dollars were destroyed (World Rainforest Movement, 1992).

In Ghana, conflict between local people and logging companies and forest department on one side is very common. According to Kotey and Mayer (1998) such conflicts are very pronounced in timber felling regions, such as Western, Eastern, Volta, Ashanti and Brong Ahafo regions.



It is recognized by the FAO (1981), that the initial effect of selective logging operations which involves combing the forest for just some few trees per hectare either often paves the way or opens up virgin forests for further encroachment. The net result is intensive influx of migrant settlers who often exert pressure on the forest through activities such as farming, cattle ranching, hunting and many others.

FAO studies undertaken in many developing countries such as Cote d'Ivoire, Costa Rica, Surinam, Ghana and others in 1981, indicate that timber extraction associated with extensive road building is the first step towards opening up the tropical forest. This encourages open access exploitation at the forest frontier especially by migrant settlers who are landless (FAO, 1981).

According to Foley and Bernard (1984) the construction of logging roads has contributed to illegal farming associated with burning and slashing of trees in many of the Coastal forest of West Africa. It is reported that not only do such informal encroachment cause deforestation through conversion of the forest to food crop farming but also the cultivation of narcotics drugs such as marijuana, coca and opium as seen in Amazon forest of Colombia (FAO, 2000).

Illegal logging is highly encouraged where commercial logging operation is or had taken place. According to International Timber Trade Organizations (ITTO, 2002), illegal logging activities resulting from logging range from 90 percent in

Cambodia to 34 percent in Ghana. A World Bank report (2001) shows that, this represents a great financial loss to local and national economy in the form of royalties, tax, job losses and reduced access to materials that can provide food and income for people living in the vicinity of the forest. In Indonesia, the loss of US \$600 million per year in unpaid taxes and royalties is four times what was spent in 2001 on subsidies and food programmes (ITTO, 2002).

### **1.6 Scope of the Study**

The study is limited to three (3) selected settlements in the district, where logging has been undertaken for many years. These are Begoro, Akwansremu and Besebuom. The focus of this study is on the socio-economic effects of logging activity on the people in the study area.

### **1.7 Operational Definitions**

Some forestry terms will be encountered in this dissertation as explained below.

**Compartment:** A small unit, sub division of an area of reserve for purposes of administration or management defined by a permanent boundary either with natural or artificial features.

**Concession:** Any right or interest to timber on any land.

<b>Deforestation:</b>	Permanent removal of forest vegetation and/or conversion of forest to non-forest uses such as farming.
<b>Forest Degradation:</b>	Reduction of both animal and plant species of a forest to such an extent that its ability to renew itself is greatly reduced.
<b>Forest People:</b>	People who live in or near forest whose ways of life and livelihoods are closely and directly dependent on forest.
<b>Forest Reserve:</b>	Forest, which by law is, owned by the state and is under strict management of forestry department.
<b>Forest:</b>	An area of land of which at least crowns of trees upon it cover 10 percent and which is not subject to agricultural practices.
<b>Logging:</b>	Felling (harvesting) and extraction of timber in the form of logs and transporting them to market centers.
<b>Off forest Reserve:</b>	Forest land which is not strictly under forestry Department management but are control by individuals or the community.
<b>Royalties:</b>	Monies received from the harvesting of timber species to owners of timber.

- Saplings** Young timber species for transplanting.
- Sustainable Development:** Increasing the opportunity of rural or local people (affected community) to determine and control the future of forest use on a long-term basis.
- Sustainable Management:** A balance between protecting resources and providing opportunities for their use.
- Taungya:** An integrated agro-forestry farming where farmers are allowed to cultivate food crops and timber within a specific given time.

### **1.8 Limitations of the Study**

Despite achieving the objectives of the work, some limitations were experienced. Most prominent were financial constraints and the difficulty in getting relevant information from source especially the chain saw operators who for fear of possible arrest were reluctant to give information.

### **1.9 Organisation of Report**

This work is organized into four chapters. Chapter one comprises introduction, which include the background of the study, statement of problem, the rationale of study, literature review, and objectives of study and definition of terms used in the study. Chapter two presents the profile of the district and the study methodology.

Chapter three deals with the findings of the study while chapter four concludes the study with the summary and recommendations.

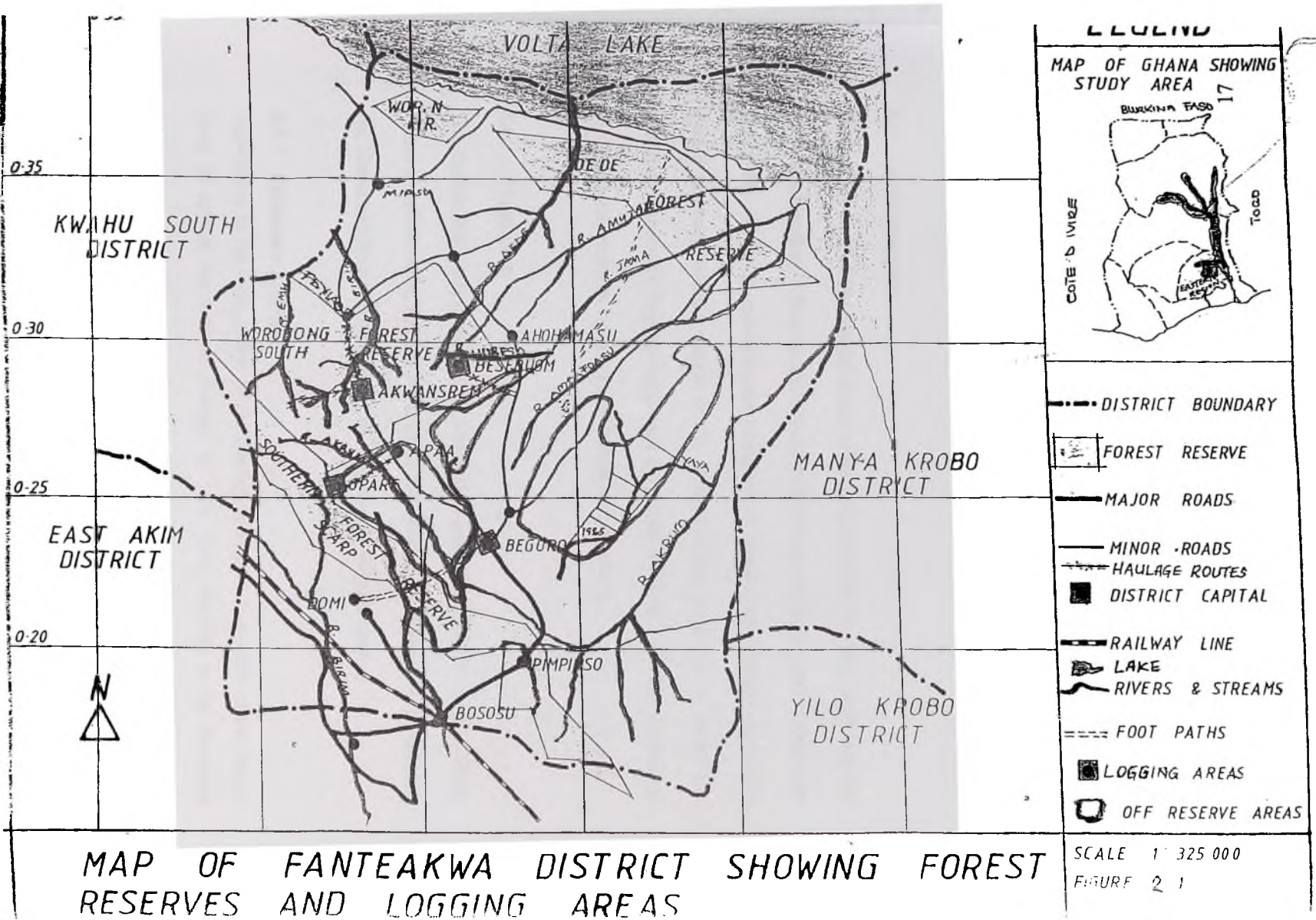
## CHAPTER TWO STUDY METHODOLOGY

### 2.1 Profile of Study Area

The Fanteakwa District is one of the newly created districts and among the fifteen districts within the Eastern Region. It was carved out of the East Akim District in 1988 with Begoro as the district capital. The forest in the district was legally declared as a reserved forest in 1927. It lies within longitude  $0^{\circ} 32'$  west and  $0^{\circ} 10'$  East and between latitude  $6^{\circ} 15'$  North and  $6^{\circ} 40'$  north. Volta Lake or Afram Plains District borders it to the north and to the west by Kwahu South District with the East Akim District to the south and Yilo Krobo District to the South East, whilst Manya Krobo borders it on the east. The district covers a total land area of 1150 square kilometers, thus occupying about 8% of the total land area of the Eastern Region (18,310 square kilometers). This constitutes 0.48% of the total land area of Ghana.

### 2.2 Vegetation

The vegetation cover is of moist semi-deciduous forest and covers about 80% of the total land area of the district. The northern part of the district, close to the Volta Lake is savanna scrub type. The district initially has four forest reserves created in 1948. These reserves cover 306.4 square kilometres constituting almost 27.0% of the total land surface of the district (Fig 2.1).



MAP OF FANTEAKWA DISTRICT SHOWING FOREST RESERVES AND LOGGING AREAS

Currently the forest reserves in the district comprise of the Worobong South reserve with the size of 109.35 square kilometers, the Southern scarp reserve with the size of 122.09 square kilometers and the Dede reserve being 5.13 square kilometres in size. The Forest Service has declared the Worobong North reserve as degraded forest. The Off-forest lands are currently under serious threat of degradation as a result of farming, logging and annual forest fires.

### **2.3 Infrastructure**

The road network of the district is one of the poorest in the country, with only the major road leading to Begoro, and some few kilometers from Bosuso to Osino are tarred. The rest of the roads are not tarred which become unmotorable especially during the rainy season. Roads in the active logging areas are in deplorable condition, especially Begoro–Amaa road. Less than 40 % of over 130 settlements of the district are yet to be connected to national electricity.

### **2.4 Population**

The district has a population of 86,154 with a growth rate of 3% (GSS, 2000). Akans constitute 62%, Krobo 19%, Ewe 10% and the remaining 9% comprising Ga, Hausa and Basari ethnic groups who are mostly migrant settlers.

### **2.5 Economic Activity**

Agriculture is the main sector of the district, it employ over 65% of the labour force as against the national average of 51%. Crop farming is the dominant

farming type with cocoyam, plantain, maize and cassava being produce by farmers. Other sectors such as mining, service, commerce, building and construction employing varying proportions of the labour force (Lanbonga, 1996).

## **2.6 Sources of Data**

The study used both primary and secondary sources of data. Questionnaire and interviews were utilised in collecting the primary data from 100 respondents, from the selected communities where logging is carried out. Certain key stakeholders who are engaged in the logging activity were contacted and interviewed on certain salient areas related to the topic. These include the under mentioned:

- District Assembly ;
- District Forestry Service;
- Timber Companies ;and
- Opinion Leaders,

Additional information was obtained from secondary sources. Official documents on the activity were obtained from the District Assembly and District Forest Service for perusal. Desk study was also undertaken to gain deep insights into areas of concern to the study.

## **2.7 Sample Design**

To realise the objectives of the study, 100 respondents were selected from three communities in the study area. These were Begoro, Akwansremu and Beseboum due to three important reasons; ethnic diversity of the inhabitants, diverse economic activity relating to logging and more importantly the intense nature of

the logging activity in the areas over the years. A simple random technique was used in selecting the respondents from 100 households. The 100 respondents were distributed across as follows; Begoro (60), Akwansremu (20) and Besebuom (20) taking into account the population size of each selected community.

## **2.8 Method of Analysis**

This study employed basic and simple statistical tools to analyse the data. Among these tools were measures of central frequency such as percentages, proportions and ratios. Graphical tools such as bar charts, pie charts were used to illustrate certain trends and patterns observed in the report.

Descriptive analysis mainly univariate and bivariate analyses were carried out to explain important variables used to determine their relevance to the study.

## **CHAPTER THREE**

### **ANALYSIS OF DATA**

#### **3.1 Introduction**

This chapter presents the analysis of fieldwork. Some of the issues discussed in the chapter include institutions involved in logging, employment creation, infrastructure development, compensation and revenue and income generation from the activity in the Fanteakwa District.

#### **3.2 Background Characteristics**

##### **3.2.1 Sex Distribution**

In all 100 people were interviewed; of the total number of respondents interviewed, males formed the majority 67% (67) with 33% (33) being females.

##### **3.2.2 Age Distribution**

The age distribution of respondents is presented in Table 3.1. The pattern in the table suggests that the 40-44 age cohort forms the majority, whilst the respondents over 60 years forms the smallest of the respondents sampled. The table also indicates that males dominate all categories with the exception of 30-34 cohort.

**Table 3.1: Age Distribution**

Sex	Number	Percentage
30-34	12	12
35-39	22	22
40-44	38	38
45-49	12	12
50-54	6	6
55-59	6	6
60+	4	4
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Fieldwork, Fanteakwa District, 2002.**

### 3.2.3 Occupational Distribution

Table 3.2 gives a breakdown of types and number of occupations of the respondents sampled in this study. It is evident that farming is the major occupation among the target population accounting for 80% of all respondents sampled in this study. Chainsaw Operators and Hunters follow with 7% each, whilst Firewood Collectors formed the smallest (6%) group.

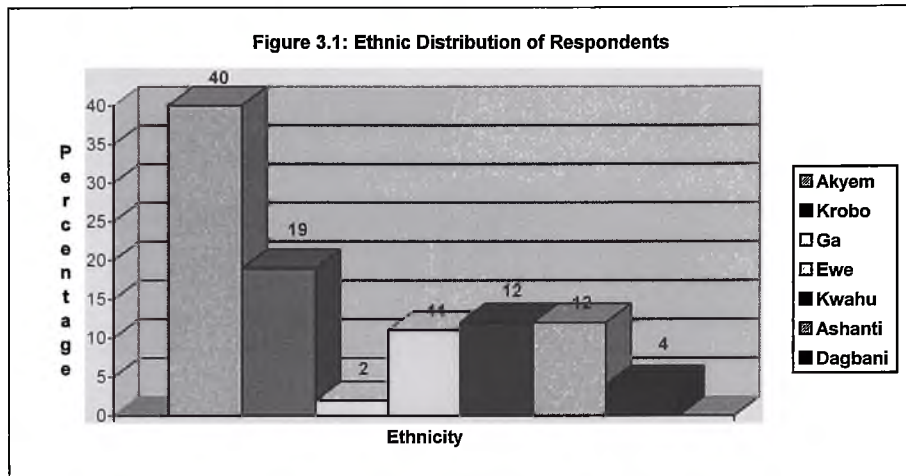
**Table 3.2: Occupational Distribution**

Occupation	Male	Female	Total Number	Percentage
<b>Farmers</b>	52	28	80	80
<b>Hunters</b>	7		7	7
<b>Chainsaw Operators</b>	7		7	7
<b>Firewood Collector</b>	1	5	6	6
<b>Total</b>	<b>67</b>	<b>33</b>	<b>100</b>	<b>100</b>

**Source: Fieldwork, Fanteakwa District, 2002.**

### 3.2.4 Ethnicity

Akyems, who are the indigenes of the district, constituted 40% of the sample. The Krobos were 19%, Kwahu and Ashanti constituted 12% each with 11% being Ewes (Figure 3.1). Other minority groups included Dagbani (4%) and Gas (2%).



Source: Fieldwork, Fanteakwa District, 2002.

In an interview with officials of the District Assembly, it was reported that logging enhances the influx of migrant from neighbouring districts to embark on farming. Cross-tabulating ethnicity with place of residence, as shown in Table 3.3, buttresses this. Table 3.3 reveals interesting results with Krobos constituting the largest ethnic group (36.2%) instead of the Akyems (25%) who are presumed to be the indigenes of the district, implying that more Krobos might have migrated from the neighbouring districts.

**Table 3.3: Farmers' Ethnic Backgrounds**

Ethnicity	Begoro		Akwansermu		Besebuom		Total	
	No.	%	No.	%	No.	%	No.	%
Akyem	20	25	2	2.5	1	1.3	23	28.7
Krobo	16	20	7	8.8	6	7.5	29	36.2
Ga	2	2.5	1	1.3	1	1.3	4	5
Ewe	4	5	2	2.5	2	2.5	8	10
Kwahu	1	1.3	2	2.5	1	1.3	4	5
Ashanti	4	5	1	1.3	2	2.5	7	8.8
Dagbani	3	3.8	1	1.3	1	1.3	5	6.3
Total	50	62.6	16	20.2	14	17.7	80	100

**Source: Fieldwork, Fanteakwa District, 2002.**

### **3.3 Institutions in the Logging Activity**

The institutions and individuals in the logging activity within the Fanteakwa District are the District Forest Service (DFS), the Fanteakwa District Assembly, five Timber Companies and a number of illegal chainsaw operators.

It was noted that although the Fanteakwa District Assembly and the District Forestry Service do not directly partake in the logging activity, they are instrumental in the administrative and supervision of the logging business in the district. The major players, however, are the timber firms operating in the area.

### **3.4 Fanteakwa District Assembly**

Even though Fanteakwa District Assembly is not directly involved in the logging activity in the district, the study found that it plays administrative role, makes by-

laws, and collects royalties or revenue from the timber companies on behalf of the people for the development of the district, thus making it a vital player in the logging activity in the Fanteakwa District.

### **3.5 District Forestry Service (DFS)**

The main body with full mandate to see to the management of forest resources in the area is the District Forestry Service (DFS), which was reported to have been established in the district on 18<sup>th</sup> March, 1993. Prior to this period, the office was in Koforidua. In order to effectively monitor and manage the affairs of the forest reserve in the Fanteakwa area, the office was moved to Begoro. This move also solved proximity problems that were related to the management of the forest with the office located in Koforidua. In a discussion with officials of the Forestry Service, it was reported that the main problem of the service is inadequate personnel, transport and funding which often makes it difficult for them to carry out effective monitoring exercises.

### **3.6 Timber Firms**

There are five registered timber firms in the Fanteakwa District. However, only 3 were reported to be in active operation in the study area. It was gathered that Ghanaians own all the timber firms in the study area. The names and dates of their establishment are indicated in Table 3.4.

**Table 3.4: Timber Firms in Fanteakwa District**

<b>Name of Company</b>	<b>Date of Establishment</b>
P.A.K. Asiama Timbers	1978
Joseph William Darkwa Timbers	1982
S K. Owusu Ltd.	1992
Oda Sawmills	1995
Lawrence Akosa Yeboa Timbers	1977

**Source: Fieldwork, Fanteakwa District, 2002.**

The dates provided in Table 3.4 indicate that Lawrence Akosa Yeboa Timbers is the oldest Timber Firm in the district, having been in operation for more than twenty years. From the table Oda Sawmills is the latest established in the district.

### **3.7 Chainsaw Operation**

In addition to the afore-mentioned institutions, there are as illegal chainsaw operators and firewood collectors, whose activities are also related to logging in the district. Interaction with some of the chainsaw operators revealed that many have being operating for more than five years in the district especially in the off reserve forest.

### **3.8 Logging and Employment Creation**

In order to find out whether logging creates employment for people living within the activity area, the researcher engaged in discussions with the Human Resource

Units of two of the Timber firms which have been constantly operating in the study area over the years as well as, chainsaw operators and firewood collectors

The Human Resource officials interacted with indicated that 44 employees on their payroll, only 27% are people recruited from the communities as shown in Table 3. 5.

**Table 3.5 Number of Employees of S. K.O and P.A.K. Asiama Timbers**

<b>Company</b>	<b>Number of local Employees</b>	<b>Number of Migrant Employees</b>	<b>Total</b>
S.K.O Timbers	8	21	29
P.A.K Asiama Timbers	4	11	15
Total	12	32	44

**Source: Officials of S.K.Owusu and P. A. K. Asiama, 2002.**

The officials the view expressed that the majority of workers on their pay roll are migrants. Additionally, information gathered in focus discussions held with community leaders in the three communities; Begoro, Akwansremu and Besebuom confirmed that as a result of the failure to gain employment in the timber firms, most local folks have been compelled to engage in other alternative logging related activities such as firewood collectors and chainsaw operations as means of livelihood (see Table 3.2).

It was also gathered that the lucky few people employed by the firms are engaged on temporary basis and are laid off any time if the firm so wishes. About 70% of respondents expressed the view that the failure of the timber companies to hire local labour has had negative socio-economic impacts. They explained that many of them cannot afford to send their children to school or meet their medical expenses adequately when sick.

Having considered the argument, it can be inferred that the timber companies have not been very effective in the area of employment creation for the local people, who are supposed to be the direct beneficiaries of employment opportunities within the firms.

### **3.9 Logging and Chainsaw Operation**

Chainsaw Operation was found to be one of the livelihoods of people in the district as shown in Table 3.2. The study identified 7 chainsaw operators from the 100 people interviewed who were bold enough to admit to be carrying out such an illegal activity. Other discussions had showed that most residents, other than those sampled, undertake chainsaw operation as secondary activity.

Over 60% of the number indicated that they operate in the off reserve forest. When a sample of the chain sawyers were asked if they have any plan of changing their occupation, the majority (80%) expressed the view that since they have no

other livelihood, they will continue to fell trees, especially in the off reserve forest. They also said that they have been operating in the manner they do because the timber companies do not establish sawmills in their localities to provide employment for people in the study area. Additionally, the concessionaires also do not sell wood to them, denying the local people the opportunity to get boards for furniture, construction and other household purposes

Expressing opinion on the ban of their activities, majority of the illegal chainsaw operators sampled said that the ban has made life very uncomfortable for them and their families because the chainsaw activity as their main livelihood, earning between ₵500,000 and ₵1,000,000 per a month.

On the basis of these comments the researcher further ask, how they want the logging activity in the district to be undertaken. Interestingly a catalogue of answers were given, prominent among include; the lifting of the ban on chainsaw operation, Formation of Association, Creation of job by timber firms and Investment in social amenities by timber firms operating in the district. These views were ranked on a score of 100 % (Table 3.6).

**Table 3.6 Expectations of Chainsaw Operators**

<b>Expectation</b>	<b>Percentages</b>
Lifting of ban on chainsaw	45
Creation of Employment by timber firms	29
Investment in Social amenities by Timber Firms	16
Formation of Chain-sawyers Association	10
Total	100

Source: Fieldwork, Fanteakwa District, 2002.

It is observed that 45% of the response wants the ban on timber felling by chainsaw operators to be lifted. The remaining 55% is shared in varied proportions; Creation of employment (29%), Investment of social amenities (16%) and Formation of Chain sawyers association recording 10%.

On the other hand, Forestry Officials reported in an interview that chainsaw operation has been banned because it constitutes a great economic and environmental cost to the nation. It was gathered that most of the chainsaw operators fell *odum*, *emere* and mahogany, which are considered to be very expensive and could fetch the nation some foreign exchange if accredited concessionaires fell them.

The study further revealed that though there is ban placed on chainsaw operation by the Forestry Commission since 2000, people still do it illegally (in the night). It was found that in order to avoid arrest most chainsaw operations are done place after 6 p.m.

From the argument, certain measures have been put in place to check illegal chainsaw activities in the district, even though this move has proved futile. Lessons drawn from the experience is that all efforts made so far have failed because chainsaw operation serves as an avenue for creation of job opportunities for the unemployed in the study area.



Secondly, the behaviour of a human being is determined by the circumstances he finds himself. In other words until the people find themselves in some gainful employment, they will continue to flout laws and encroach the forest to degrade it. It will be expedient to re-examine the efforts made to address illegal chainsaw operations in the district, taking into account the significant role the activity plays in the local economy.

### **3.10 Logging and Firewood Collection**

Firewood collection was found to be another activity related to logging in the study area. From the interactions, it was gathered that some people make a living from this activity in the area. It was also reported that this activity has been institutionalized and that one has to secure a permit from the Forest Service before collecting fuel wood for commercial purpose. Of the 100 people sampled 6 (6%) were identified as professional firewood collectors who collect firewood in large quantities for sale or export to the urban centres of Accra, Kumasi, Koforidua and others. It was also revealed from personal discussions that almost every farmer once a while does engaged himself or herself in professional firewood collection by selling from their farms to the identified professional firewood collectors.

It was gathered that firewood collection is a female dominated activity with about 80 % (5) of the six respondents engaged in the activity being females. The

interaction with the firewood collectors revealed that most of them have been in the business for the past years. It was ascertained that the main source of fuel wood is from the forest reserve. On the average, 30kg of firewood sells at ₵10,000. It was found that the majority (90%) earn about ₵270,000 per month. Most firewood collectors claimed they used routes created by timber companies to get to the place of activity in the forest. Table 3.7 provides information on occupational backgrounds of the people interviewed.

**Table 3.7: Information on Logging Related Occupations**

Occupation	Begoro	Akwansremu	Beseboun	Total	%	Place of Activity (%)					
						Forest Reserve		Off Reserve		Both	
						No.	%	No.	%	No.	%
Farming	50	14	16	80	80	39	39	37	37	4	4
Hunting	3	3	1	7	7	5	5	1	1	1	1
Chainsaw Operators	3	1	3	7	7	2	2	4	4	1	1
Firewood Collection	4	2		6	6	5	5	1	1		
Total	60	20	20	100	100	51	51	43	43	6	6

**Source: Fieldwork, Fanteakwa District, 2002.**

From Table 3.7 farmers constitute 80% of all respondents sampled, with the activities such as illegal chainsaw operation, hunting and firewood constituting the remaining 20%. The study reveals that about 51% of activities that provide employment for the local people occurs in the forest reserve, whilst the off reserve

activities are undertaken by 43% of the residents. About 6% of the farmers were found to engage in activities that take place in both forest reserve and off reserve

From Table 3.7 chainsaw operation was found to take place more in the off-forest reserve (4%) than in the reserve (2%) as majority of the chainsaw operators interviewed claimed. Hunting on the other hand is mainly done in the forest reserves where logging is being practiced.

### **3.11. Logging and Farming**

The study showed that farming has a link with logging. When the farmers were asked how their activity is related to the logging activity in the district, they (72%) explained that farming is not directly related but it is rather an offshoot of the timber felling activity that paves way for farming. Respondents explained that logging paves way for farming activities because when access routes are created farmers take advantage to either enter the forest reserve for farming or other agricultural related activities.

About 60% of respondents further expressed the view that without logging they would have found it very difficult to enter the forest to embark on their activity. This opinion is illustrated in Figure 3.2, which shows some farmers plying one of the routes constructed by a timber firm for logging activity to undertake their agricultural activities in the study area

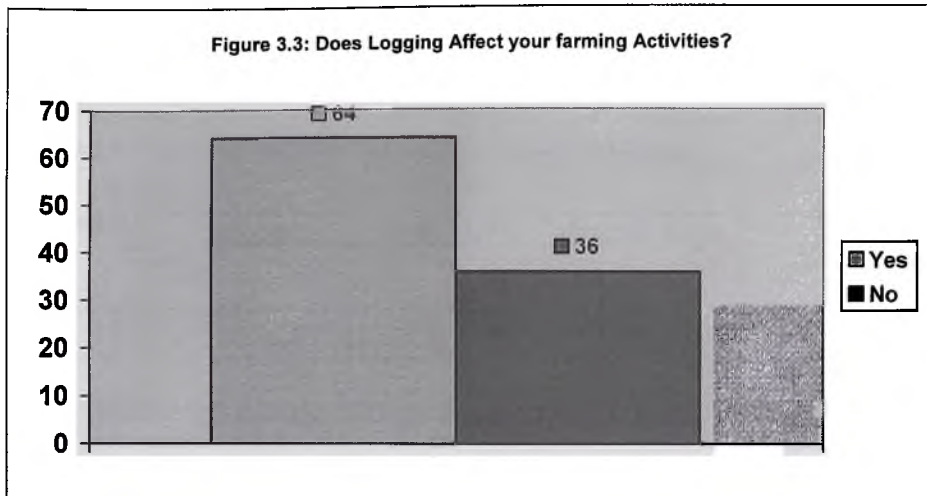
**Figure 3.2: An access route created from Akwansremu to Fayiase by a timber firm**



Source: Fieldwork, Fanteakwa District, 2002.

### **3.11.1 Effects of Logging on Farming**

In order to ascertain the extent to which logging has affected farming, respondents were asked to express their opinion. In response about 64 % (51) farmers said that their activities are sometimes affected by the logging activities as shown in Figure 3.3



Source: Fieldwork, Fanteakwa District, 2002

Explaining how it affects them, 44% (35) of the farmers explained that timber felling destroys their crops such as plantain, cassava, maize and coco yam. The remaining 20% explained that the logs sometimes fall and destroy plant species and species and land which take quite long to regenerate.

It was observed that 47.5 % (38) of the respondents have being farming for over 10years in the logging areas whilst 25 % (20) farmers have also being farming for less than 5years. Of the 47.5 % response, 84 % (32) indicated that logging is affecting their farming activity. On the other hand, 75% farmers who have being farming for less than five years expressed that logging does not affect their farming activity. This varied response shows that farmers' ability to comment on logging is highly affected by the number of years one is engaged farming in an

area. It is thus rational to conclude that the farmers can assess the impact of the logging activity based on the number of years of farming.

**Table 3.8: Response of Farmers and Duration of Farming**

Response	Duration						Total	
	<5 Years		5-10 Years		Over 10 Years			
	N0.	%	N0.	%	N0.	%	N0.	%
<b>Yes</b>	5	25	14	64	32	84	51	64
<b>No</b>	15	75	8	36	6	16	29	36
<b>Total</b>	20	100	22	100	38	100	80	100

**Source: Fieldwork, Fanteakwa District, 2002.**

A further investigation made into how logging has affected farming in different places of the study area revealed interesting results (Table 3.8) It was observed that almost 61% of the respondents who expressed the view that logging affect their farming were found to operate in the off - forest reserve while about 76% of those who responded that logging does not affect their farming activities were found to be farming in the forest reserve. The variation in response of the farmers in different place of farming could be explained as, the indigenes Akyem people are more concerned with the degradation of their off-forest reserve lands whilst the migrant-settlers, who are mainly Krobo's (Table 3.3) illegally encroach on forest reserves with the view that their stay is temporal hence do not consider the activities of loggers as harmful. It also means that logging activities in the off-forest reserve is done haphazardly in contrast to the forest reserve which state owned.

**Table 3.9: Response of farmers and Place of farming**

Response	Place of Farming						Total	
	Forest Reserve		Off Forest Reserve		Reserve & off Reserve			
	No.	%	No.	%	No.	%	No.	%
Yes	17	33.3	31	60.8	3	5.9	51	100
No	22	75.9	6	20.7	1	3.4	29	100

Source: Fieldwork, Fanteakwa District, 2002.

### 3.11.2 Types of Farming Practices

Cross-tabulating the types of farming practices in the study area with the areas of operation revealed very interesting results as indicated in Table 3.10.

**Table 3.10 Types of Farming Practices in Logging Activity Areas**

Type of farming Practice	Place of Farming						Total	
	Forest Reserve		Off-Forest Reserve		Both Reserves			
	No.	%	No.	%	No.	%	No.	%
Shifting Cultivation	29	74.4	30	81.1	2	50.0	61	76.3
Agro-forestry	6	15.4	5	13.5	1	25.0	12	15.0
Mixed cropping	2	5.1	2	5.4	1	25.0	5	6.2
Other	2	5.1	0	0	0	0	2	2.5
Total	39	100	37	100	4	100	80	100

Source: Field work, Fanteakwa District, 2002.

About 76% of the farmers interviewed practice shifting cultivation. This means that shifting cultivation is very popular among the farmers in the study area. This type of farming was however popular among farmers operating in the off-forest reserve constituting a little over 81% compared with 74% of those who practice it in the forest reserve.

From discussions with the Forestry Officials, it was found out that slash and burn is the commonly used method for preparing land for cultivation. It was also reported that the practice has an adverse effect on fertility of the soil. As indicated in table 3.10, Agro- forestry, a modern system of farming is not widely (15%) practiced among farmers in study area. However it was noted that it is quite popular among farmers in the forest reserve (15.4%) due to the introduction of *taungya* system to replenish the depleted forest. Other practices identified by the study include crop rotation and mixed farming.

It can be inferred from the argument raised that the most commonly used farming method in the study area is shifting cultivation and this mainly done in the off-forest reserves. Since shifting cultivation involves persistent movement of farming activity from one plot of cultivation to another, it does also imply a consistent depletion of forest resources from one place to another.

### **3.11.3 Log extraction by Timber Firms**

In order to ascertain the information on log extraction by the timber firms in the study area and its negative impacts on the environs, two of the timber firms which have been operating consistently in the area were engaged in a discussion on the issue. The number of logs extracted by the firms between 1992 and 2001 are presented in Table 3.11.

From table 3.11, log extraction by the two firms increased within the specified period. The total number of logs increased from 763 in 1992 -93 to 5477 in 2000 - 01, an increase of 132% over the period translating to an average of 608 trees (logs) per year.

**Table 3.11 Log extraction by S.K.Owusu and P.A.K. Asiama Timbers 1992 – 2001(Number of trees)**

Years	Type of timber species						Total
	<i>Wawa</i>	<i>Odum</i>	<i>Emire</i>	Mahogany	<i>Asanfina</i>	other	
1992-93	140	91	141	114	157	120	763
1994-95	158	64	143	122	213	116	816
1996-97	231	94	131	188	226	114	984
1998-99	255	97	209	232	220	131	1144
2000-01	360	105	240	320	505	240	1770
Total	1144	451	864	976	1321	721	5477

**Source: S.K.Owusu and P.A.K. Asiama Timbers**

It was also gathered from some officials of the timber firms as well as residents that log extracted are not replenished by the firms. This is both economic and environment loss to the district and the people, as these species on the average take over 40 years to reach size of allowable cut (Prah, 1994).

### **3.11.4 Compensation for Destruction of Farms**

Table 3.10 indicates the proportion of farmers who had received compensation from timber firms for the destruction of their farms between 1992 and 2001 in the

study area. It was identified that only about 41% of farmers had received some form of compensation from the timber firms. Apart from Akwansremu, where majority of the affected farmers (55.6%) had received some compensation, most of the affected farmers in the other communities were paid no compensation.

It was gathered from discussions held with officials of the timber companies that they usually do not replenish crops and lands destroyed as result of their activities but in some cases, farmers are compensated in cash.

**Table 3.12 Compensated Farmers (1992-2001)**

Response	Communities						Total	
	Begoro		Akwansremu		Beseboum			
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Yes</b>	14	41.2	5	55.6	2	25	21	41.2
<b>No</b>	20	58.8	4	44.4	6	75	30	58.8
<b>Total</b>	34	100	9	100	8	100	51	100

**Source: Fieldwork, Fanteakwa District, 2002**

The researcher was informed by the farmers that compensation given to farmers ranged between ₵100,000 and ₵600,000. The affected farmers expressed the view that the compensation paid was not commensurate to the destruction done to their farms.

### 3.11.5 Expectations of Farmers from Timber Firms

Having considered all the issues on logging and farming, the farmers were asked to express their expectation from the timber firms in the various communities. Varied opinions were given among the pertinent ones includes; investment in social amenities by timber firms, provision of direct employment, a ban on logging in the study area, prompt payment of appreciable compensation to affected farmers as a result of logging and the introduction and use of afforestation as pre-requisite for timber permit (Table 3.13)

Almost 29% of the respondents expected the introduction of a well packaged and sustained afforestation programme as a precondition for the granting of concessions to timber firms. This was followed by a total ban on logging which was expressed by 20% of the respondents while 15% expected timber firms to offer direct employment to local people among other concerns.

**Table 3.13 Expectations of Farmers from Timber Firms.**

Expectations	Communities						Total	
	Begoro		Akwansremu		Beseboun		No.	%
	No.	%	No.	%	No.	%		
Investment in Social amenities	4	8	5	35.7	5	31.3	14	17.4
Provision of Direct Employment.	8	16	2	14.3	2	12.5	12	15
Ban on logging	13	26	2	14.3	1	6.2	16	20
Introduction of afforestation as a condition for timber permit	16	32	3	21.4	4	25	23	28.8
Prompt Payment of Compensation	9	18	2	14.3	4	25	15	18.8
Total	50	100	14	100	16	100	80	100

Source: Fieldwork, Fanteakwa District, 2002

It was however observed that the expectations of respondents varied from one community to another. For instance, while most of the respondents from Begoro (32%) were more concerned about the afforestation programme, almost 38% and 31% of the respondents from Akwansremu and Besebuom respectively expected more investment in social amenities due the deprived nature of the communities compared with Begoro, which is the district capital.

### **3.12 Effects of Logging on Hunting**

Hunting was one of the activities found in this study to be related to the logging activity in the study area. About 7% of the total number of respondents sampled were hunters. Respondents (hunters) said that hunting is usually done mainly in the forest reserve especially at Akwansremu, with most of them using routes constructed for logging purposes.

It was gathered that logging has had an effect on hunting. In explaining this, the majority of the hunters interviewed claimed that they were killing an average of two animals per week in the late 1980s. However, game performance has reduced by about a hundred percent owing to the activities of loggers in the district lately. This is expressed in a statement made by a chief hunter at Akwansremu who has been a hunter for over thirty years, *'I was killing monkeys, antelopes, bush pigs, porcupines and deer before the timber companies evaded this place. Now I hardly see these animals in my expedition. Presently the only common catches are grass cutters, rats and squirrels'*.

In view of the low catch, price of game has increased more than double since the reintroduction of commercial logging in the district. In explaining how logging affects hunting, some of the respondents said that the noise made by the heavy machinery used by the timber firms frighten the animals, and sometimes destroy their habitat, leaving no place for the animals to live. This is likely to affect the protein intake of the local people, as bush meat is the major source of protein for about 80 percent of rural people (Kotey and Mayer, 1998).

The low catch of game will therefore deny majority of these local people the ability to afford bush meat due to scarcity. Since some people make a living from this hunting, a reduction in catch affects the livelihood of those engaged in this activity. The study further revealed that in the past some hunters earned as much as a ₵800,000 on the average per month but this has reduced to about ₵400,000 per month. According to them this has made it extremely difficult for them to meet their family responsibilities. The Amankrado of AkwansremU reiterated that *this timber felling business has brought a lot of hardships to us and for sometime now people hardly contribute to omantoo (development levy).*

### **3 13 Conflict between Local folks in Study Area and Timber Firms**

In order to gain deep insights into the conflict situations in the study area, it was gathered, there have been numerous occasions when conflicts have broken up between loggers and local folks over issues such as payment of compensation for

destruction of farms and land. Again, the refusal of loggers to replenish the lands destroyed and their logging failure to create job opportunities for the locals has also served as cause of disagreement between the loggers and the locals.

About 80% of the respondents expressed the view that they have been part of more than ten demonstrations in the last ten years, 10% said that they have been part of about five demonstrations within the same period, whilst the remaining 10% indicated that they have not been part of any sort of civil action. Most of the confrontations were linked to dissatisfaction on the part of the residents over inadequate compensatory packages and the lack of job openings and replenishing the depleted forests for the local people.

#### **3.14 Revenue and Income Generated from Logging**

The presence of logging companies in the Fantekwa District has contributed to revenue generation in the form of royalties to the District Assembly. In an interview with the District Budget Officer, it was reported that royalties are major source revenue to the District Assembly and is second to the Common fund for some years running. Table 3.14 gives a breakdown of royalties collected from logging companies from 1992-2001.

**Table 3.14 Royalties Collected from Logging Companies from 1992-2001**

<b>Year</b>	<b>(¢) Million</b>
1992-1993	12.8
1994-1995	24.4
1996-1997	72.4
1998-1999	89.7
2000-2001	135.5
2002	51

**Source: District Budget Office, 2002.**

From Table 3.14 revenue generation is on the increase over the years taken into account the percentage change in the royalties paid for the period 1992 to 2001. It was reported that the District Assembly has managed to embark on development projects from this revenue source. Between 1970 and 2001, the District Assembly has constructed and rehabilitated boreholes, constructed and renovated health and educational facilities from royalties and other revenue generated from logging.

It was also gathered from District Assembly officials that other projects have been embarked upon through direct funding from the timber companies or through indirect contribution of royalties. Some of the examples given are indicated in Table 3.15. A picture of 5.2 kilometer access road from Akwansremu to Fayiase constructed by Wiafe Timbers in the 1970s is illustrated in figure 3.3. However an official from the District Assembly was quick to express his personal opinion that this amount is just a token considering the number of logs that go out of the district daily.

**Table 3.15: Timber Firms' Contribution to Infrastructure Development**

Location	Year	Type of Project	(₵) Millions	Financier
Akwansremu to Fayiase	1970	Construction of a 5.2 kilometer access road	Not Available	Timber firm
Begoro	1998/2000	Construction of a Community Library	60.2	Timber firms & District Assembly
Begoro	1998/2000	Construction of Police Station	56	Timber firms
Apa-Akwasremu	1996 & 2001	Rehabilitation of Feeder Roads	12	Timber firm & District Assembly
Besebom	1999	Construction of a Bridge	4	Timber Firms

**Source: District Assembly, 2002.**

Table 3.15 indicates some examples of projects undertaken by the timber concessionaires to improve lives in the district. Though these attempts at improving the lives of the people have been taken, majority of the people in the study area indicated that much has not been done. In their view, a lot more could have been done to improve standards of living, considering the rate of timber logs extraction from the district to outside and the destruction caused to road networks and the district's environmental resources. This perception was further buttressed by their opinion leaders. For instance at Besebom the Assembly member for the area said; *only a small bridge constructed by Asiama Timbers can not compensate for the vast forest lost let alone the untold hardship brought to us, as our production levels are consistently falling compare to the years before logging started in this area.*

### **3.15 Relationship between Logging and Marketing**

From the discussion with some officials of the timber firms, it was gathered that most of the firms do not sell wood (logs) to the local people within the district; they rather transport them to outside the district for export. Of the 100 people sampled about 62.5% expressed the view that the involvement of commercial timber firms in commercial logging activity has indirectly enhanced their position to market their products. They explained that through the access routes constructed by timber firms they easily get to market centers at places such as Begoro, Apaa, Fayiase and Ahomahomasu to sell or buy materials for their daily activities.

For the hunters, the construction of the access roads has made it easy for them to reach out to more customers in other communities on traveling vehicles during market days. Respondents also mentioned that the roads constructed by the firms has made it easy for many to get access to better health, educational, social welfare and trading commodities in the nearby towns such as Begoro, Ahomahomasu and Obooho.

### **3.16 Policies and Laws on Timber Felling**

The study found during the discussions held with forestry officials and opinion leaders in the three communities that there have been 29 policies and decrees related to sustainable forestry resource management in Ghana since 1874. These

had not been to the interest of improving the living standard of the local people rather the emphasis of the policies have been mainly economic thus liquidation of forest for foreign exchange especially in the off forest reserve own by the local people. This to a large extent has been the main reason for the encroachment of forest reserve as local people seek for means for survival.

The study again revealed that most policies and laws have not been fully implemented or adhered to by Governments, individuals and groups that engage in the forestry sector. 60% of people spoken to on this subject said that there have been many instances where people or corporate bodies have flouted the legal institutions and instruments made to protect forest resources. For instance, the Forest Protection Decree, 1974 as amended by Forest Protection (Amendment) Law 1986 prevents any person (s) from encroaching on forest lands without permission from the Forestry Department. The Forest Ordinance 1927, 1994 Forest and Wildlife Policy and other legal instruments spell out specific regulations to protect timber resources and local people who are the landowners, yet these have not been adhered to.

Some respondents also expressed their disapproval over the arrangements made by Forestry Service to disburse revenue generated from logging. It was gathered that this does not favour the local people with the Forest Service retaining 70% of all revenue received from logging the forest reserves, which were formally owned

by the local people. The remaining 30% was reported to go to the administrator of stool lands; the actual share of the district assembly and the local communities is only 20% (from the 30%) and the remaining 10% goes for administrative cost at the Stool Lands Secretariat.

The local people expressed the view that they have not been treated fairly in the distribution of revenue and the sharing of resources thereby compelling them to engage in other nefarious forest- related activities for survival. The study found that this illegitimate activity serves as the main bone of contention that exist between commercial loggers and local inhabitants and which occasionally leads to conflicts or encroachment of forest resources.

## CHAPTER FOUR

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 4.1 Summary and Conclusion

The subject matter of this study was to assess the impact of logging activity on the socio-economic development of the people of Fanteakwa District in the Eastern Region of Ghana.

The main objective of the study was to examine the effects of logging on socio-economic development in terms of; job creation for local people, effects on farming, hunting, revenue generation and infrastructural development.

One hundred (100) respondents were randomly selected from three communities namely Begoro (60), Akwansremu (20) and Beseboum (20), which have experienced the logging activity for several years.

Data collected from respondents, using semi structured questionnaire were analysed by simple descriptive statistics. Secondary data were also collected from the timber firms operating in the district as well as the District Assembly. Information was also sought from the District Forestry Service and other relevant stakeholders in the communities.

The study revealed that the logging activity has affected farming activities in all the three communities. It was found out that 64% of the farmers interviewed expressed the view that logging has negative impact on their farming activities.

The study further revealed that 41% of the affected farmers indeed received some compensation from timber firms for the destruction of their farms. They however complained that the amount received did not cover the total cost of the lost. It also revealed that destruction of farms in the off-reserve is higher (75%) compared with 47% in the forest reserve.

It was observed that logging has been a major cause of encroachment on the forest reserve especially by migrant settlers particularly Krobos (36.2%) of the farmers interviewed.

It was also identified that the logging activity has negatively affected hunting as majority of hunters interviewed complained that their total catch has declined from an average of 8 animals to only 2 per a week in places where the logging activity has been persistent.

The study further found that illegal chainsaw operation has been very pronounce especially in the off-forest reserve due to their inability to secure jobs in the

timber firms. The evidence available indicated that the ban placed on chainsaw operation has not been effective as expected in the district.

According to the hunters interviewed, logging has been a major contributory factor to the sharp decline in their catch. This could be attributed to the persistent noise making machines, which frightens the animals to relocate in the deeper forest. The activity also reduces the thickets, which serve as habit to the animals.

As revealed by the study, although the logging activity generates revenue for financing development projects in the district. It was learnt from an official of the District Assembly that the total amount paid as royalties by the timber firms is too small compared with the number of logs transported within the period.

The study further revealed that although there have been over 29 forest policies and legislations to ensure sustainable forest management and timber felling. Unfortunately these policies made a little provision for the promotion of the welfare of the local people (communities). The emphasis of all the policies have been towards the economic gains to the government and the timber firms at the expense of the welfare of the local communities especially the landowners in the off-forest reserves.

Findings on the perceptions of respondents about the logging activities indicated that 40% of the respondents want timber firms to engage in intensive afforestation programme so as to restore the depleted forest.

It was also revealed that about 63% of the respondents indicated that the logging activity has indirectly enhanced their position to market their products as they easily transport the goods on the access routes constructed by timber firms to and from the communities.

Notwithstanding the negative effects of associated with logging, the industry is still important for the socio-economic development of the district. It is therefore necessary that the activity is organized on a more sustainable manner.

## **4.2 Recommendations**

Based on the findings of the study, the following recommendations have been made to help improve upon the operation of logging in the district.

### **4.2.1 Strict Enforcement of Afforestation Laws**

To address the current laxity in the enforcement of the forestry laws, there is the urgent need to call for a strong collaborative effort among the major stakeholders. By this, monitoring committees should be formed in the district to include the District Assembly, the District forest service, the timber firms and more

importantly all interest groups in the affected communities. This collaborative effort is to ensure that all the timber firms operating in the district are awarded timber permits base on their exhibited ability and competence in adhering to the laid down forest regulations.

#### **4.2.2 The Introduction of Social Responsibility Agreement Act to the Existing Forestry Policies and Legislation.**

To ensure sustainable forest management to the benefit of stakeholders especially the local communities, important innovations should be made to the existing forest policies and legislation to incorporate the welfare concerns of the people. By this there should be the introduction certain criteria such, social responsibility act to make timber firms mandated to contribute to social development.

#### **4.2.3 Legalisation of Chainsaw Operations**

The activities of illegal chainsaw operators pose a great environmental and financial loss to the district. It is therefore prudent for the government to review the Timber Resource Management Act of 1997 (Act 547) and the Timber Resource Regulations of 1998 (LI 1649), which ban the activities of chainsaw operators to accommodate chainsaw operations in the district and the country at large. To ensure their effective operations, the chainsaw operators should be obliged to form an association. This will help the District Assembly and other relevant institutions such as the Forestry Service Division not only to generate

needed revenue but more importantly for the institutions to monitor their operations more effectively. It will also promote internal monitoring among the individual members.

#### **4.2.4 Creation of Alternative Job Opportunities**

In order to reduce the over dependency on the depleted natural forest among the people, all stakeholders including NGOs and the District Assembly should introduce programmes and activities that will reduce the overdependence of the people on the natural forest for living. For instance, the training of the people to adopt new agricultural practices such as snail rearing, bee keeping, glasscutter rearing and other economic activities such as batik making as well as the development of Eco-tourism sites which are abundant in the district, will reduce the overdependence on the forest.

#### **4.2.5 Prompt Payment of Adequate Compensation**

Timber firms should be made to pay adequate compensation to farmers promptly. To ensure this, the District Assembly in conjunction with loggers, affected farmers and opinion leaders should dialogue to determine a commensurate compensatory package for affected farmers.

#### 4.2.6 **Promotion of Private Participation in Forestry**

Individuals in the communities should be supported by the District Assembly, the Forest Service Division and environmental friendly NGO's to engage in plantation forestry especially farmers in the off forest reserve. This will not only help restore the depleted forest but also create additional employment as well as ensuring the sustainability of the demand for wood in the district.

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**APPENDIX**  
**QUESTIONNAIRE FOR THE STUDY**

**SECTION A: PERSONAL DETAILS**

1. Sex: a Male b Female
2. Age: a 30-34 b 35- 39 c 40-44 d 45- 49 e 50-54 f 55-59 g 60+
3. Which ethnic group do you belong to?
  - a. Ashanti . e. Ga i. Kwahu
  - b. Akwapim f. Akyem j. Dagbani
  - c. Fanti g. Ewe k. Nzema
  - d. Ahanta h. Guan m. other
4. Place of Residence.....
5. How long have you lived in this area? .....
6. Occupation a. Farmer (**Go to SECTION B FOR FARMERS**) b. Chainsaw Operator (**Go to section c. FOR CHAINSAW OPERATORS**) c. Hunter (**Go to SECTION D FOR HUNTERS**) d. Firewood collector (**Go to SECTION E FOR FIREWOOD COLLECTORS**).

**SECTION B: FARMERS**

1. How long have you been farming in this area? .....
2. Place of Farming activity a. In the Forest Reserve b. off- Forest  
c. Both Reserves
3. Type of farming practice.....
4. What type of crops do you cultivate? a. Maize b. Plantain  
/Cocoyam c. Vegetables d. Other (specify)

6. Explain your answer in question?.....
7. What are some of the changes in your activity with the introduction of logging in this area? .....
8. Does timber felling affect your farming activity in any way? a. Yes  
b. No 99. Don't know
9. How does timber felling affect your activity? .....
10. Is there any compensatory package for land of farm destruction from Timber Firms in the area? a. Yes b. No
11. State the type of package.....
12. If compensation is in cash how do you usually receive.....
13. What is your opinion on the type of package given? .....
14. Do you know of any development projects undertake by timber firms operating in the area? a. Yes b. No
15. Mention some of these projects? .....
16. Have you in any way benefited from any of the development projects undertaken by timber firms in your area? a. Yes b. No
17. In what way have you benefited from these development projects?.....
18. What is opinion on logging activity in the area?.....
19. How does logging affect environmental social and economic development of this area?.....
20. Give reason for your answer in Q19.....
21. Do you know of any forest policy that seeks to ensure sustainable management?  
a. Yes b. No
22. Please make a list of such policies? .....
23. What do you expect from the timber firms to ensure development in such areas?  
.....  
.....

**SECTION C: CHAINSAW OPERATORS**

1. How long have been operating in the district as a chainsaw operator? .....
2. Which part of the forest do you normally operate?  
a. forest reserve b. off-forest reserve c. both forest and off-forest reserve
3. Are there any regulation concerning timber felling in the area of your operation?  
a. Yes b. No
4. What some of these regulations? .....
5. When do you normally undertake your operations? a. at dawn b. afternoon c. at night.
6. Explain your answer in question five (q5). .....
7. What does your activity entail? .....
8. What form of wood do you deal in? a. logs b. lumber c. other (specify).....
9. Where do you sell your end products? a. In the community b. out side the community c. outside the district d. other (specify) .....
10. Do you know of any development projects undertake by timber firms operating in the area? a. Yes b. No
11. Mention some of these projects? .....
12. Have you in any way benefited from any of the development projects undertaken by timber firms in your area? a. Yes b. No
13. In what way have you benefited from these development projects?.....
14. What is opinion on logging activity in the area?.....
15. How does logging affect environmental social and economic development of this area?.....
16. Give reason for your answer in Q15.....
17. Do you know of any forest policy that seeks to ensure sustainable management?  
a. Yes b. No
18. Please make a list of such policies? .....



12. In what way have you benefited from these development projects?.....
13. What is opinion on logging activity in the area?.....
14. How does logging affect environmental social and economic development of this area?.....
15. Give reason for your answer in Q14.....
16. Do you know of any forest/wildlife policy that seeks to ensure sustainable management?      a.    Yes    b.    No
17. Please make a list of such policies? .....
18. What do you expect from the timber firms to ensure development in such areas? .....

#### **SECTION E: FIREWOOD COLLECTORS**

1. How long have you been engaged in firewood collection? .....
2. Where do you normally operate? a. forest reserve      b. off-forest reserve  
c. both
3. Are there any institutional regulations regarding firewood collection in the area of your operation?      a.    Yes    b.    No
4. If yes, mention some of these regulations? .....
5. Why do you collect the firewood?      a. household purpose      b.  
commercial purpose    c. other (specify) .....
6. If yes to commercial purpose, how much do you sell a head load of 30kg? .....
7. How much do you earn from this activity in a month/year?  
.....
8. Have you notice a change in the firewood collection over the years?  
a.    Yes    b.    No
9. If yes, explain? .....
10. Do you know of any development projects undertake by timber firms operating in the area?    a.    Yes      b.    No

11. Mention some of these projects? .....
12. Have you in any way benefited from any of the development projects undertaken by timber firms in your area? a. Yes b. No
13. In what way have you benefited from these development projects? .....
14. What is opinion on logging activity in the area? .....
15. Do you know of any forest policy that seeks to ensure sustainable management?  
a. Yes b. No
16. Please make a list of such policies? .....
23. What do you expect from the timber firms to ensure development in such areas?