



Declaration

We, Agbefu, Rosemary; and Agbefu, Rosemond, declare that this thesis is a result of our research investigations and findings. Sources of information other than our own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

Agbefu, Rosemary

Agbefu. Rosemond

Dedication

In loving memory of our late mother, RITA-CHARITY MANSAH KUMEDZRO. We love you, Mama.

Acknowledgement

We wish to thank the Almighty God, who has been graceful to us, and has shown us favour throughout all these years of studying. The completion of this master's thesis has been possible with the help and support of several people. First of all, we are extremely grateful to our supervisor, Darley Jose Kjosavik of the University of Life Sciences (NMBU), Ås, Norway, who dedicated her time to make sure that all our efforts paid off. From our moments on the field, to the impromptu meetings with you beyond your official meeting times, and even when chapters were not forthcoming as they should, you have proven beyond every doubt that you are committed to what you do. We are eternally grateful for your show of concern, even beyond the thesis environment. We cannot forget to thank Arild Vatn, Professor of Environment Economics at NMBU, for showing interest in our work and offering his guidance in the writing of this thesis. Our appreciation is extended to the Norwegian Research Council (NORAD) for financing our fieldwork through the POVSUS-REDD project.

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List of abbreviations and acronyms

AAP	African Adaptation Programme
ADRS	Alternative Dispute Resolution System
ATR	African Traditional Religion
BOPP	Benso Oil Palm Plantation
CBAG	Community Biodiversity Advisory Group
CSR	Corporate Social Responsibility
CREMA	Community Recourse Management Areas
ENRAC	Environment and Natural Resources Advisory Council
DA	District Assembly
DCE	District Chief Executive
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organization of the United Nations
FC	Forestry Commission
FC	Forestry Commission
FCPF	Forest Carbon Partnership Facility
FG	Focus Group
FGD	Focus Group Discussion
FLEGT	Forest Law Enforcement Governance Trade
FPIB	Forest Products Inspection Bureau
FPIC	Free Prior and Informed Consent
FSD	Forest Services Division
GDP	Gross Domestic Product
GHGS	Green House Gases
GM	General Assembly
GSS	Ghana Statistical Service
HFZ	High Forest Zone
HIPC	Heavily Indebted Poor Country
IIED	International Institute of Environment and Development
IPCC	Intergovernmental Panel on Climate Change
MESTI	Mineral Resources Environmental, Scientific and Technology
MLFM	Ministry of Lands, Forestry and Mines

MLNR	Ministry of Lands and Natural Resources
MLGRD	Ministry of Local Government and Rural Development
MTS	Modified Taungya System
NGO	Non Governmental Organization
NPP	National Patriotic Party
NREG	Natural Resources and Environmental Governance Programme
NTFP	Non-Timber Forest Produce
NWTP	Non- Wood Timber Produce
OASL	Office of the Administrator of Stool Lands
PNDC	Provisional National Defense Council
R-PP	Readiness Preparation Proposal
RCC	Regional Coordinating Council
REDD	Reducing Emissions from Deforestation and Forest Degradation
SFM	Sustainable Forest Management
SLF	Sustainable Livelihood Framework
SZ	Savannah Zone
TCC	Technical Coordinating Committee
TEDB	Timber Export Development Board
TIDD	Timber Industry Development Division
TS	Taungya System
TUC	Timber Utilization Contract
UN	United Nations
UNFCC	United Nations Framework on Climate Change
VPA	Voluntary Partnership Agreement
WD	Wildlife Division

Abstract

The study is an assessment of the livelihood and sustainable development impacts associated with REDD+ and its compensation program in the Aowin district of Ghana. Through the use of focus group discussions, we try to understand community preferences with regards to compensation for avoided deforestation and engaging in other mitigation activities. The study was carried out in six selected forest communities in the Aowin district. The theoretical framework and concepts that were employed in this study are: the Sustainable Livelihood Framework (SLF), Benefit Sharing, Institutions and the concept of Sustainable Development. SLF is used to describe the relationship between people's assets, their vulnerabilities, and processes and structures that exist to transform their assets into meaningful livelihoods. Using the concepts of Benefit sharing and Institutions respectively, we explore what benefit sharing mechanisms and institutional structures exist in the communities to ensure the implementation of REDD+ agenda, and a fair and equitable distribution of compensation. Sustainable development as a concept is used in an attempt to understand people's perceptions of sustainability in relation to REDD+ and forest management. Our findings revealed sharp differences in type of compensation that in-migrant farmers and indigenous famers prefer- indigenous farmers preferred in-kind payments, while migrant farmers preferred in-cash.

We also identified a complex legal pluralistic land tenure and unfavourable benefit sharing systems as practical challenges that could affect the implementation of the REDD+ agenda in the district.

In general, people lacked knowledge on REDD+ and related issues. However, a majority of respondents showed enthusiasm about the prospects of REDD+ in their communities.

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1. Introduction

1.1. Background

Climate change is considered as one of the greatest challenges in the world currently. It poses a threat to the sustainable livelihoods and development of people across the globe. It also has adverse effects on the environment, human security, human settlements, health and physical infrastructure, to mention a few. According to the Stern Report (2007), it is almost certain that developing countries will be the most disadvantaged, thus suffer the most from negative impacts of climate change.

The United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) has predicted that deforestation and forest degradation contribute globally to approximately 17 per cent of all greenhouse gas emissions (IPCC, 2007 Fourth Assessment Report) This is more than the global transportation sector and third only to the global energy (26%) and industrial (19%) sectors. It is estimated that tropical forests produce about 17 to 18 per cent of greenhouse gases (GHGs) that are released into the atmosphere. This is as a result of clearing the forest for farmlands, timber and other activities that tend to destroy the integrity of forests (IPCC 2007).

In order to minimize the negative impacts of climate change, there is the need for global and national efforts directed at strengthening adaptation and mitigation measures. The reduction of carbon emissions from forests is thus discussed as very important in the mitigation process. It is in this context that the international community introduced the REDD+ (Reducing Emissions from Deforestation and Forest Degradation Plus).

1.1.1. REDD AND REDD+: the international scene

Reducing Emissions from Deforestation and Forest Degradation (REDD) is an attempt by the United Nations (UN) and other international actors to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. In other words, REDD is a performance-based incentive system for countries to reduce the rate of emissions from deforestation and forest degradation. Since its inception, it has taken root in a number of countries, mostly in Africa and Latin America. At its inception, the REDD mechanism focused on reducing emissions from deforestation and forest degradation.

The Kyoto Protocol recognized that forests had a role to play in sequestering carbon dioxide (CO₂). It failed to include the issue of reducing emissions from deforestation, or avoided deforestation. In 2005 at the COP (Conference of the Parties) 11 Conference, this issue gained some momentum as a result of the Stern Report and also a formal proposal by the Coalition of Rainforest Nations.¹ It was in 2007, during the COP 13 of the United Nations Framework Convention for Climate Change (UNFCCC) in Bali, that there were agreements on payments to countries to reduce deforestation and degradation activities (called REDD). At its initial stage, REDD had the primary aim of reducing emissions from deforestation and forest degradation. At the Bali Conference however, new propositions were made to expand the framework of REDD. First of all, there were talks of a comprehensive approach to mitigating climate change. This approach included:

*“Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries”.*²

After one year, further propositions and additions were made. The scope of REDD was further expanded to include conservation, sustainable forest management and enhancement of carbon stocks. Ultimately, in 2010, at COP-16 (19) as set out in the Cancun Agreements, REDD became REDD-plus (REDD+), to reflect the new components, as follows:

- (a) Reducing emissions from deforestation;
- (b) Reducing emissions from forest degradation;
- (c) Conservation of forest carbon stocks;
- (d) Sustainable management of forests;
- (e) Enhancement of forest carbon stocks

¹ <http://theredddesk.org/what-is-redd> The REDD Desk. Accessed 06.12.2014

² United Nations Framework Convention on Climate Change. 2008. Report of the Conference of the Parties, on its thirteenth session held in Bali, from 3 to 15 December 2007. Accessed 30.10.14

In this regard, REDD+ makes an effort to pay locals for reducing deforestation while at the same time ensuring that their source of livelihoods for both the present and future is not negatively affected. Thus, the concept of sustainable development is a major aim of REDD activities. The commonest definition of sustainable development is the one adopted by the Brundtland Commission in *Our Common Future* (1987). It defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

1.1.2. REDD+ in Ghana

Deforestation has been identified as a critical environmental issue in Ghana. Between 2005 and 2010, the rate of deforestation was estimated at 2.19% per annum; the sixth highest deforestation rate globally for that period (FAO, 2010). The REDD+ agenda is to pay locals for reducing deforestation while and also conserve the forests through practicing sustainable forest management.

To address degradation, the country has implemented various programs including the Natural Resources and Environmental Governance Programme (NREG) and the National Forest Plantation Development Programme, which aims to arrest and reverse deforestation rates in the country and take steps to increase the national forest cover. Red desk. Ghana is highly vulnerable to climate change impacts. The country has embarked on a number of climate change mitigation strategies including Refrigeration Project, distribution of solar lamps and renewable energy use (Agyei 2014).

REDD+ presents opportunities for developing countries to contribute to climate change mitigation, while benefiting from financial flows accompanying the system. As part of implementing mitigating measures, Ghana has adopted REDD+ as a potential additional reward mechanism for sustainable forest protection and in support of existing policies including Forest Law Enforcement, Governance and Trade (FLEGT) and the Natural Resources and Environmental Governance Program (NREG).³ Ghana has been an active participant in the international process directed at mitigating climate change. In contributing to the goals of REDD+, the government of Ghana, through designated institutions, has been cooperating with international and local partners to implement REDD+. In 2007, the country

³ *Ghana's Revised Readiness Preparation Proposal Final*. December 2010.

submitted its REDD+ Readiness Plan Idea Note (R-PIN) to the Forest Carbon Partnership Facility (FCPF) of the World Bank. This was approved in July 2008, setting the grounds for the signing of a Preparation Grant Agreement totaling US\$ 200,000 (Government of Ghana, May 2014).⁴This money was used to finance a REDD+ Readiness Preparation Proposal (R-PP). After extensive deliberations with experts and local and international stakeholders, Ghana submitted the local and international Revised R-PP to the FCPF in December 2009. This was assessed and approved in March 2010. Approval paved the way for signing of a Readiness Grant of \$3.4 million for its implementation in 2011.

Officially, Ghana's REDD+ Readiness Programme was launched in April 2012 (ibid) Ghana's R-PP presents a three-step approach towards REDD+ readiness from the period 2011-2014. The three step approach include the development of a REDD+ strategy, as well as the a technical, policy, legal, management, and monitoring arrangements necessary for full participation in the evolving REDD+ mechanism (ibid).

As of now, Ghana's REDD+ preparation is reasonably advanced, as it is at the piloting phase. Consultations are being held in preparation of a National REDD+ Strategy as well as a National implementation plan.

In spite of these positive strides however, the country is still grappling with the lack of understanding of REDD+ by various interest groups, especially those at the grassroots level. Another challenge is the confusion over rights and ownership of trees and carbon stored. Ghana's land ownership system is quite complicated. Farmers or landowners do not necessarily own the naturally occurring trees that grow on their lands or forests. User or economic rights of the trees belong to the government, farmers only have access rights. This confusion does not motivate farmers to take good care of the trees that grow on their lands. In fact, some farmers deliberately cut down the trees in their early stages before they grow, government gives concessions to some timber companies to cut the trees, and that mostly destroys their crops.

⁴ Government of Ghana, May 2014. *National Redd+ R-PP Implementation Mid-Term Progress Report And Request For Additional Funding Submitted To The Forest Carbon Partnership Facility (FCPF) By National Redd+ Secretariat, Ghana Forestry Commission*

Against this background, this study is aimed at assessing local peoples perceptions of sustainability with regards to forest practices, and REDD+, the preferences of compensation, and the livelihood and sustainable development impacts that REDD+ activities and compensations are likely to have on their lives. The study is conducted in six REDD selected pilot villages in the Aowin district of the Western region. Through focus group discussions (FGDs), we will examine and analyse the issues mentioned above.

1.2 Statement of the problem

Forests contain enormous natural resources and represent a huge source of economic wealth for any country. They are a source of livelihoods for a lot of people. Ghana's vast forests provide a wide range of uses, from ecosystem services to non-wood products. Benefits of forests range from timber for both local and global markets, medicinal purposes, fuel wood and a source of livelihood.

In spite of the important role that forests play in Ghana's economic growth and development, deforestation and degradation are one of the biggest environmental challenges facing the country today. This is mainly caused by overexploitation of the forests in order to satisfy the socio-cultural needs of the growing population (EPA 2004)⁵. Also, unsustainable practices such as bush burning, mining, and clearing of the land for settlements and farmlands greatly contributes to this challenge.

Combating deforestation and forest degradation is an important step to solving this problem. Ghana has undertaken a number of initiatives aimed at strengthening the forestry sector in an attempt to reduce deforestation and degradation. However, most of these have lacked the element of motivation for people to desist from engaging in unsustainable forest practices. REDD+ is fashioned in a way that compensation will be paid to local communities (farmers and other users of the forest) for avoided deforestation and degradation. The study is aimed at understanding people's expectations and preferences on what types of compensation formats local communities prefer and what the effective approaches are for arriving at their preferred choices. In the process, we will capture local peoples views on sustainability and livelihood

⁵ Environmental Protection Agency (EPA) (2004). *Ghana State of the Environment Report*, EPA Ghana, Accra. Pp 11-51)

strategies.

1.3 Rationale

Indigenous knowledge of forest management and conservation is critical to tackling deforestation and degradation. Such knowledge is not only an efficient way of knowing what the local people think about forest management and conservation, but is also resourceful in formulating policies for the forestry sector and more importantly for future climate change architectures in other developing countries. This study is important because in addition to the above, it provides knowledge about community preferences on compensation, and also helps in the successful implementation of REDD+ in other communities or developing countries. Local peoples' social and economic livelihoods will also be greatly improved with the successful implementation of the compensation scheme under REDD+. We believe that by seeking people's own perceptions on what kind of payment formats would be best suited to their particular conditions, the potential of people cooperating in REDD+ schemes will be higher (Kjosavik et al 2013).

1.4 Objective

The study was undertaken with the objective of understanding the types of compensation local communities in the Aowin district of Ghana prefer, in return for avoided deforestation and refraining from livelihood activities that could potentially lead to forest degradation, as well as for undertaking other positive mitigation activities.

1.5 Research Questions

The following central questions will guide the research:

- a. What are the perceptions of the local people on Sustainability and REDD?
- b. What is the preferred nature of compensation?
- c. What distributional issues are involved in compensation, and how effective are local institutions?
- d. What are the livelihood and sustainable development impacts of REDD+ compensation on local people?

1.6 Structure of thesis

The thesis is divided into eight chapters. Chapter one gives background information on the outlook of climate change and its effects on the globe. It also gives the reader a brief

introduction to REDD+ both on the international scene and in Ghana's context. The objectives of the study follow, as well as the main problem underlying the study. The rationale for undertaking this study is also spelt out. In addition, we spell out our main research questions that we seek to find answers to in this thesis.

Chapter two looks at the profile of the Aowin district, our district of study. Specific indices to be looked at include geology, climate and vegetation, agriculture, infrastructural development, economic development, ethnicity, health, livelihood activities and education.

In **chapter three** we look at the methodology. This chapter serves as the window to the whole research, as it gives a detailed account of how data was collected, what methods were employed in collecting data, and what tools were used to analyze the data. It also looks at other research issues associated with/ the data gathering process, such as ethics of research and limitations.

Chapter four talks about the forestry sector in Ghana. We look at the land and tree tenure system in Ghana and how that impacts on REDD+ policy in Ghana. What are the policy and legal frameworks governing the sector, and what are some challenges facing it?

Chapter five looks at some concepts applicable to our study. The Sustainable livelihoods Framework (SLF) is the principal theoretical basis of this work. In addition, we will look at the concepts of benefit sharing, institutions and sustainable development. We will review some literature around our research area. Through this, we can compare what has happened elsewhere with the Ghana experience, drawing differences and similarities in the process, thereby enhancing a healthy intellectual discourse.

Chapter six discusses the nature of preferences. We also discuss in the last part of this chapter, our findings on the livelihood and sustainable development impact of REDD+ compensation in Aowin.

Chapter seven discusses people's perceptions on REDD+, sustainability, equity and effectiveness of local institutions in REDD+ architecture.

Chapter eight is the concluding chapter. We conclude the entire work by discussing the strengths and weaknesses of theories and concepts applied to the study, as opposed to data

collected on the field. We take a reflexive look at the impact of compensation on poor peoples' livelihoods. We also suggest some areas for future research.

2 STUDY AREA

This chapter will give a brief overview of the Aowin district, which is our study area. Before this, it is appropriate to give a brief overview of the country in general, and the Western Region, the region in which Aowin district is situated, then give a detailed overview of Aowin study area. The concluding part of the chapter talks about REDD+ in Aowin.

2.1 A Brief Description of Ghana

Ghana is located on the west coast of Africa, bordered by Togo in the east, Côte d'Ivoire⁶ in the west, Burkina Faso in the north and the Atlantic Ocean in the south. It covers an area of 238, 500 square kilometers. The country lies in close proximity to the equator, about a few degrees north. Its climate is mainly tropical, making it warm and dry for most parts of the year.

The country was the first black country in sub-Sahara Africa to gain independence. Ghana has one of the most thriving democracies in a rather troubled continent bedeviled with conflicts. For this reason, the country is often referred to as an “island of peace”. Since 1984, the country has been divided into ten administrative regions, which are further divided into 138 districts. Provisional results from the population and housing census (2010) indicate that the country has a population of 24.6 million people, drawn from more than one hundred ethnic groups. Out of this, the male population is 12,024,845 and the female population is 12,633,978.⁷

The country's economy is dominated by agriculture, which employs about 40 % of the working population. Cocoa exports are an indispensable part of the economy. Ghana is the world's second-largest producer, coming second only after Ivory Coast. In addition, Ghana is the second producer of gold in Africa. The country is also a major exporter of a significant amount of other commodities such as diamonds, bauxite, lumber, aluminium and manganese ore.

Ghana is regarded as one of the fastest developing economies in the world. In June 2007, major offshore oil reserves were found in the Western Region of the country, which has given

⁶ Cote d'Ivoire and Ivory Coast are used interchangeably for the same country in West Africa where the former is the French name and the latter is the English name.

⁷ 2010 Population and Housing Census.

expectations of a major economic boost. Regarding the ecology of the country, it is divided into a High-Forest Zone (HFZ) in the south, a Savanna Zone (SZ) mostly in the north, and a transition zone. Estimates of total forest area in the country range from 2.72 million hectares to 6.34 million hectares. It has a total land area of 23.9 million hectares (FAO 2005). Land use types are arable lands - 17.54%, permanent crops - 9.22% and others - 73.24%. It has irrigated land of 310sq km (in 2003). The terrain is mostly low plain with dissected plateau in South-central area, with a climate which is tropical, warm and comparatively dry along southeast coast, hot and humid in southwest; hot and dry in the north (Domson and Vlosky 2007).

Figure 1: Map of Ghana



Map of Ghana showing national and international boundaries. Source: www.mapsoftheworld.com. Accessed: 10th December 2014.

2.2 Profile of the Western Region

The Western Region is located in the south-western part of the country, covering an area of 23,921 square kilometers. Sekondi/Takoradi is the capital. The population of the region is 1,924,577 (National Population and Housing census, 2000), forming about 10 per cent of the total population of the country, with a population growth rate of 3.2%. The population is quite young, with over 40 per cent within the age group 0-14, and a dependency ratio of 88.3 %. The population density is 80.5 persons per square kilometer. Females constitute 49.2 per cent of the population, translating into a sex ratio of 103:4. The proportion of urban to total population is 36.3 per cent, with the three most urbanized districts being Shama-Ahanta East (100%), Bibiani-Anhwiaso-Bekwai (37.5%) and Wassa West (35.6%).

It is bordered by Ivory Coast on the West, Central Region on the East, Ashanti and Brong-Ahafo Regions on the North and on the South the Atlantic Ocean. The region lies in the equatorial climatic zone that is characterized by moderate temperatures, ranging from 22°C at nightfall to 34°C during the day. It is the wettest part of Ghana, with a double maxima rainfall pattern averaging 1,600 mm per annum.

Figure 2: Map of Ghana showing the Western Region and the study area



Source: [http://en.wikipedia.org/wiki/Western_Region_\(Ghana\)](http://en.wikipedia.org/wiki/Western_Region_(Ghana)) Accessed: 18th November 2014.

2.2.1 Vegetation

The region has about 75 per cent of its vegetation within the high forest zone of Ghana. The south-western areas of the region are prominent for their rain forest, intermixed with patches of mangrove forest along the coast and coastal wetlands, while a large expanse of high tropical forest and semi-deciduous forest is also found in the northern part of the region. There are 24 forest reserves in the region, accounting for about 40% of forest reserves in the country.⁸

⁸ <http://www.ghanadistricts.com/region/?r=5&sa=130> Accessed: 2nd November 2014.

There are two rainfall peaks that fall between May-July and September/October. In addition to the two major rainy seasons, the region also experiences intermittent minor rains all year round. This high rainfall regime results in much moisture giving birth to high relative humidity, ranging from 70 to 90 per cent in most parts of the region.

2.2.2 Political and administrative structure

Regarding the political and administrative hierarchy of the region, the Regional Co-ordinating Council (RCC) is the highest decision making body and comprises the Regional Minister who doubles as its Chairperson, District Chief Executive (DCE), Presiding members of the various district assemblies and two paramount chiefs nominated by the Regional House of chiefs. There are 11 eleven districts within the region, each having a District Assembly (DA) appointed by the President of Ghana.

2.2.3 Culture and language

The region is culturally diverse. It has a total of five major indigenous ethnic groups namely Ahanta (6%), Nzema (11), Wassa (12), Sefwi (11%) and Aowin/ Brusa (3%). These five major ethnic groups coexist alongside each other and their boundaries overlap and understand each other's languages. The Sefwi and Brusa in particular are very similar to each other both in language and culture.

2.2.4 Ethnic composition

Estimates reveal that about 18 % of Ghanaians by birth in the region are Fantes. Other ethnic groups who have migrated into the region include the Asantes (7.3%), Ewes (5.9%), Brongs (3.4%) and Kusasis (2.9%). Most of the region's inhabitants are either Ghanaians by birth (92.2%) or by naturalization (4.1%), with a couple of immigrants from other neighboring West African countries such as Cote d'Ivoire, Burkina Faso and Mali. There is freedom of religion; however, Christianity accounts for 81.0% whiles Islam accounts for (8.5%). Traditional religion is also practised by 1.5 per cent of the region's population, while 8% reported no religious affiliation. The literacy rate is 58.2 percent, which compares to the

national average of 57.9 per cent. The rate for females is 47.9% compared to 68.0% for males. The highest educational attainment level by females (42.4%) in the region is primary, while for males (42.4%) it is middle/junior secondary school (JSS).⁹

2.2.5 Economic Activities

The four major occupations in the region are agriculture including fishing, animal husbandry and hunting (58.1%), production and transport work (14.5%), sales work (10.2%) and professional and technical work (5.4%). The major industrial activities in the region are agriculture, excluding fishing but including forestry and hunting (58.1%), mining and quarrying (2.4%), manufacturing (10.2%) and wholesale and retail trade (10.3%). The working population in the private formal (13.5%) and the public (6.0%) sectors are mainly employees of private and public sector employers. The region attracts many male migrants, mainly to the cocoa-growing and mining areas.

2.2.6 Natural Resources

The Western region has been nicknamed the “breadbasket of Ghana”. This is as a result of the abundance of natural resources in the region. It is the largest producer of cocoa and timber, the second highest producer of gold after the Ashanti region. Tarkwa goldfields, which is the largest goldmine in the country is found in this region. Other major goldmines found in the region are Aboso goldfields, Teberebie goldfields, Iduaprem goldfields, and Prestea-Bogoso mines. Yet, there are still other unexploited ore deposits in the forest reserve areas of Jomoro, Aowin district, Suaman district, and Amenfi districts among others.

The region is home to Ghana’s only economically- viable rubber plantation, as well as the only commercial manganese mine in Ghana in Nsuta. Additionally, the only bauxite mine is found in the region. Commercial quantities of oil palm plantations abound. The Benso Oil Palm Plantation (BOPP), owned by Unilever, which represents one of the largest in the country, is found in Takoradi.

⁹ www.ghanadistricts.com Accessed: 20th September, 2014.

Finally, the recent discovery of commercial quantities of crude oil in Cape Three Points, located in the Western region is proof that the region is indeed the “breadbasket” of the country. Major timber companies are found in Samreboi, Takoradi, Sefwi-Wiawsi and Bibiani.

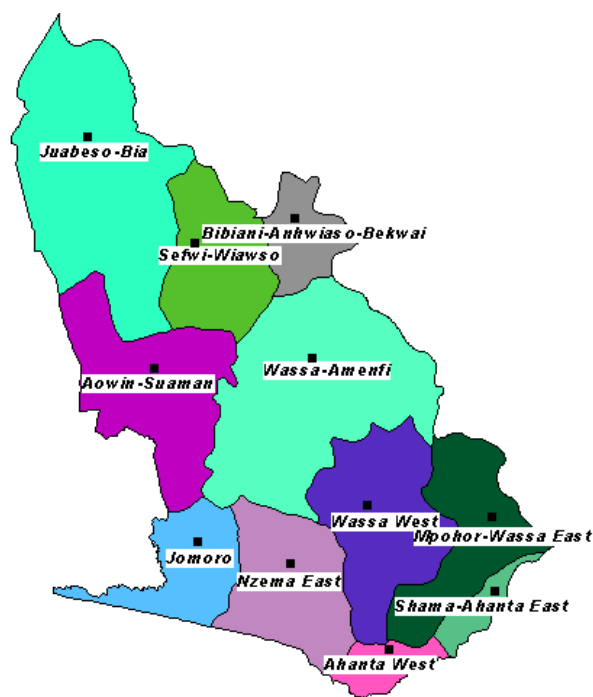
2.3 Description of study area: Aowin District

The Aowin District Assembly was created from the erstwhile Aowin Suaman District Assembly (1988-2012), which was dissolved and divided into the Aowin *and* Suaman districts. By exercise of the powers bestowed on him, the Minister for Local Government and Rural Development by subsection (1) of section 3 of the Local Governments Act, 1993, Act (462) on 15th March, 2012, declared Aowin a separate district with Enchi as the district capital, with other major settlements including Boinso, New Yakasi and Jensuu.

Location and size

The district is located in the mid - western part of the Western Region of Ghana, and shares boundaries to the West with Ivory Coast, to the South with Jomoro District, to the East with Wassa Amenfi, to the North with Juabeso-Bia and Sefwi-Wiawso. The total area of the district is 2,717.8 square kilometers, constituting about 12.9% of the Region’s total area of 23,921 square kilometers.

Figure 3: map showing the location of settlements in Aowin/Suaman District



Source: <http://www.ghanahealthservice.org/region.php?dd=8®ion=Western%20Region>

Accessed: 11th June, 2014.

The district consists of five (5) town/area councils with roughly 134 communities.

Table 1: Number of communities in town/area council

TOWN/AREA COUNCIL	NUMBER OF COMMUNITIES
Enchi town	10
Boinso area council	36
Adjoum area council	17

Achimfo area council	33
Yaakase area council	38

Source: www.mofep.gov.gh

Accessed: 11th December 2014.

2.3.1 Population size and rural urban distribution

The total population in the district is 119,133 people, with males constituting 53.1% and women making up 46.9%, thus making it a male-dominated one. The population is distributed over 312 settlements (2000 Population and Housing Census). The population is largely rural with over 84% living in rural settlements, while 15.7% of the population live in urban centers. The population grows at a rate of 4.7%, higher than the regional average of 3.2%. One factor that accounts for the high population growth rate is the influx of migrants from other parts of the country to farm in the district.

2.3.2 Vegetation

The district lies in the high forest zone of the Western Region. The vegetation is divided into two, namely Forest Reserves/ Sacred Groves and Areas of fallow land and tree crop plantations and wetlands. The Aowin district has 8 forest reserves, namely the Yoyo river forest reserve, Boin river forest reserve, Boi-Tano forest reserve, Disue forest reserve, Jema-Asemkrom forest reserve, Tano Nimore forest reserve, Tano Anwia forest reserve and Tano Ehuro forest reserve. Of these, only the Jema-Asemkrom forest reserve been declared as a Globally Significant Biodiversity Area (GSBA). In the case of the non-GSBA forests, it is permitted to legally fell trees inside them. The common threat facing these reserves is the illegal harvesting of NTFPs. For instance, the Ghana Police Service reported that between 2008 and 2009, there were about 100 cases of illegal logging and lumbering activities in the district. (Forest Services Division, Enchi (2009). The DA has no significant level of control over the reserves.

In the forest reserves, the vegetation is usually rain forest. In order to conserve the reserves, lumbering and farming activities are not permitted there.¹⁰ (ghanadistricts.com). The district has very fertile soils that support the growth of both food and tree crops.

2.3.3 Climate

The district experiences a wet semi equatorial climate with an average temperature of 26°C. March and April are the warmest months. Data from the meteorological department indicates that like the entire country, the district is getting warmer. Rainfall pattern in the district is the bimodal type with June and October being the peak seasons. The annual rainfall average ranges between 1500mm and 1800mm. However, meteorological data from 1990 to 2009 points to a rise in both the intensity and mean annual rainfall amounts in the district for the past 18 years. This situation has often resulted in rising volumes of water bodies which causes periodic flooding of farms and settlements along rivers with huge social cost arising from loss of lives and properties as well as disruption of economic activities for days. Relative humidity is mostly high, ranging between 75% and 80% during the wet season and decreasing to about 70% for the rest of the year.

2.3.4 Ethnicity and religion

Diverse ethnic groups exist in the district, but the Akan constitute the largest (about 64 per cent of the entire population). 3% of the population is made up of Ghanaians by naturalization and other foreign nationals, who mostly come from the Ivory Coast, Burkina Faso and Mali. The rest of the population making up 33%, consists of migrants from other parts of the country. A substantial section of the migrants come from the Volta Region, Eastern Region and the Northern part of the country. The predominant language spoken in the district is Aowin or Brusa, which is part of the Akan group of languages. There are three main religious groups in the district: Christianity, Islam and African Traditional Religion (ATR). Christianity can be said to have the most adherents in the district, about 79.8 per cent of the total population. Islam follows next, and then ATR. There is little or no incidence of conflict among the various religious groups. They live peacefully with each other.

¹⁰ www.ghanadistricts.com

Accessed: 6th april 2014

2.3.5 Education

Collaboration between the district assembly, ministry of education and development partners has seen the building of some classroom blocks for the district. In spite of this, there are a limited number of educational facilities in the district, most of which are in a poor state. Education, especially for the girl child, is a priority on the development agenda of the district. The Nana Brentu Senior High School (SHS) in Enchi is the only Senior High School (SHS) located in the district. The Enchi College of Education is one of the four teacher training colleges in the region. Non-formal education is also given to people especially farmers, to enable the use of modern farming equipment and technology.

2.3.6 Political and administrative Organization

The Aowin District Assembly has a total membership of 47, made up of the District Chief Executive, thirty (30) electoral members, two (2) Members of Parliament (MPs) and 14 Government Appointees. The Assembly has three main functions namely legislative, deliberative and resource mobilization/development planning. There are also two electoral areas. The Central Administration handles the day-to-day administration of the district. The Assembly has a lot of decentralized departments, which include education, youth and sports, finance, agriculture, natural resource management and health.

2.3.7 Decision-making and traditional authority

The General Assembly (GA) is the highest decision making body. Members of the GA are elected by the people themselves. As the main deliberative organ of the Assembly, it discusses all important issues affecting the District, such as approving the Annual Budget and Action Plans, and approves settlement schemes. Like many rural settings in Ghana, traditional chiefs occupy a very important place in the hierarchy of the traditional authority. The Aowin traditional area is headed by a Paramount chief. Amongst other things, the chief is the custodian of all lands under his jurisdiction or which falls within his traditional area. He also acts as the settler of disputes between the people.

2.3.8 Electricity

Rural electrification is important for rural development and for creating jobs through the establishment of rural companies. 17 of the main communities are hooked to the national grid.

One advantage of rural electrification is that farmers process some of their produce by electrical means and sell them at high prices because of increased value.

2.3.9 Health services

There is government hospital at Enchi and 7 Health Centres spread across the communities. The Presbyterian Church of Ghana complements health care services, by operating a Maternity Home and two Health Care facilities. Generally, health facilities are equally distributed across the district. The Health Centres at Boinso and Sewum have modern facilities jointly provided by the Assembly and the Saudi government. There are efficient and dedicated health workers and training has been offered by the Assembly on a periodic basis.

2.4 Water and sanitation

The district capital Enchi enjoys potable water from Small Town Water Facility. The Assembly usually collaborates with private development partners. Also, efforts have been made to improve the sanitation of the district. There have been provision of household toilets as well. In addition, there are six public toilets provided by the Assembly mainly to cater for strangers to the communities.

2.4.1 Economic activities

The following table shows the breakdown of occupations in the Aowin Suaman District:

Table 2: Occupational Distribution by Population in Aowin Suaman districtt

OCCUPATION	MALE	FEMALE	TOTAL
Professional, technical and related workers	1718	1021	2739
Administrative and managerial workers	61	30	91
Clerical and related workers	922	169	1091

Sales workers	611	1275	1886
Service workers	532	1078	1610
Agricultural, animal husbandry, fishermen and hunters	25154	20,339	45493
Production, transport operators and labourers	747	1341	2088
Others	2818	648	3466
TOTAL	32,563	25,901	58,464

Source: GSS (2005) Population and Housing Census

2.4.1 Agriculture is the backbone of the district economy. In terms of natural resource endowment, the Aowin district is one of the most endowed in the country, with abundant forest resources, water bodies and gold deposits. Agriculture is predominantly rural. Most of the economically active population are engaged in farming, forestry and fishing activities. The main crop grown is cocoa, over 93% of the population are cocoa farmers (ghanadistricts.com). Other crops grown are oil palm trees, rubber, citrus and coffee. These are mainly grown as cash crops, although on a small scale. Major food crops produced in the region are maize, plantain, cassava and rice. Apart from agriculture, there are other economic activities which serve as sources of income for local people.

2.4.2 Lumbering

The Aowin district is endowed with some of the richest forest reserves in the country. There are 8 forest reserves in all. These are Dadieso Forest Reserve, Tano Ehuro Forest Reserve, Tano Anwia Forest Reserve, Tano Nimiri Forest Reserve, Boi Tano Forest Reserve, Jema Assemkrom Forest Reserve, Boin River Forest Reserve, Disue River Forest Reserve and Yoyo Forest Reserve. The major timber species in the reserves are Wawa, Odum, Mahogany, Emire, Sapele, Ofram and Asanfena. There are two large-scale timber-processing companies. These are Samartex Timber and Plywood Company; and General Development Company. Due to the abundance of timber species with great economic value, several other timber firms have been attracted to work in the district. One challenge facing the district has to do with

illegal chain saw activities and bush mill, which is carried out mostly by the locals. The flora and fauna species in the reserves are rare and serves as tourist attractions. A greater part of the district's forest is under reserve. Chieftaincy problems abound. Land litigation is also a big challenge in the district.

2.5 Alternative Livelihood activities

The people in the district are engaged in other livelihood activities including livestock production, fish farming, and small-scale mining.

Livestock production: The people engage in this activity on a much lower scale, on a subsistence level. In recent years, this has changed as more people are turning to this as alternative source of livelihood. This has become necessary in the face of low and unreliable rainfall pattern and flooding, which lead to low crop yield and destroys farms. Livestock activities involve cattle rearing of cattle, sheep and poultry. The presence of forage plants such as elephant grass and guinea grass for grazing by animals, and the high demand of animal protein makes livestock production a viable source of livelihood.

Fish farming/Aquaculture: aquaculture is one of the major sources of protein in most Ghanaian dishes. It is consumed extensively and is easily affordable. However, the remote location of the Aowin district away from the coast makes fish for meals very scarce and an expensive commodity. The presence of large tracts of water-logged areas in the district has provided inhabitants the opportunity to engage n fishing. There are numerous ponds for this purpose. Fishing is done on a commercial basis as well, for example in Dadieso and Asuaklo communities.

Small-scale mining (“Galamsey”)

Geological surveys in the Aowin district have revealed large deposits of gold in places such as Achimfo and Sewum. Apart from the presence of big companies such as Red Black and Newmont Ghana Limited, some local people are engaged in small-scale mining, known locally as *galamsey*. A small-scale local company called Africanus also operates in the district. The income from these mineral resources supports households.

2.6 Climate Change in Aowin district

The negative effects of climate change have been common occurrences in the district. There is evidence of climate change in the district. Variability in the climate in recent years is proof of this. According to most responses we got from the FGDs, the rainfall pattern has changed, as there are now shorter dry seasons, leading to a remarkable decrease in the amount of rainfall over the past decade or so. This, according to the people is a result of trees in the forests being cut down indiscriminately. Low rainfall negatively affects the growth of crops. In one of our FGDs¹¹, one respondent recounted how cutting of trees in the forests has led to a reduction in the amount of rainfall. He also said that about 30 years ago, there was an incidence of an elephant emerging from the deep forests into the community (Ney Yaakase), but in recent times, it's been difficult to spot wildlife. The cutting of trees have destroyed their natural habitat, and forced them to move very far away, into Ivorian forests. This, according to him, has impacted adversely on the tourism potential of the district, as Ghana is losing revenues from tourism.

On the other extreme, the most apparent effect of climate change is seen in the form of seasonal floods. There is seasonal flooding of the Enchi Township and the surrounding farms in the low lying areas, as well as the fifteen communities surrounding the town.¹² Also, it was observed that there is a change in temperature. In most of the FGDs, people observed that temperatures have increased. At one extreme, it is too cold, and at the other, there is too much heat. Although there is much more rain now than heat, the weather is so warm during the dry season that it destroys crops. On the other hand, too much rainfall has led to a reduction in temperature at night. One respondent recounted that some few years back, he could sleep outside in the open at night, due to too much heat inside, but it is a different story now, as it is almost always too cold most nights to sleep outside. Flooding leads to loss of livelihoods, loss of human lives and property and the destruction of infrastructure. Some adverse effects of flooding are that when cocoa farms are flooded, the cocoa pods are washed away. Excessive heat can also cause early ripening of immature cocoa pods (Gyampoh and Asante 2011). The communities livelihoods are greatly affected because most cocoa farmers get low yields and hence less income from selling their produce.

Food crops grown for domestic consumption also are also prone to flooding. Some tuber crops like yam, cocoyam, and cassava get rotten in the soil because the soil is too moist.

¹¹ FGD carried out in Sewum (Men), August 2012.

¹² ghanadistricts.com/aowinsuaman. *Aowin Suaman District Assembly*.

Furthermore, those who engage in livestock rearing have their animals carried away by flooded waters, leading to the destruction of their source of livelihood. Fishing ponds get over flooded during the rainy season, and fingerlings are carried. Finally, mining pits are flooded with water, and this prevents miners from going to work.

Responding to climate change

Local capacity to deal with the negative effects of climate change was low until the intervention of the African Adaptation Program (AAP) In October 2010.¹³ This program was intended to build the adaptive capacity of local people and other stakeholders in the district. Thus climate change and disaster risk management issues were introduced into the planning and budgeting process of the district. The Aowin district is one of only five in the country to benefit from the Climate Change Funds under the AAP. In 2011, a total of \$122,000 allotted to the district to help it among other things, train local stakeholders on Climate Change adaptation and Disaster Risk Reduction, and to form climate change awareness clubs in selected schools in the district.

2.7 REDD+ in Aowin district

The pilot area for the REDD+ programme is located in the Aowin district. The Forestry Commission (FC) is responsible for implementing REDD+ in this district. The pilot project encompasses monitoring the cocoa production sites for increases in carbon stock, as well as for biodiversity conservation. The aim of the pilot is to avoid the potential danger of encroachment on Boin River Forest Reserve through initiatives in the cocoa sector which aims to improve yields on existing cocoa-crop lands, and at the same time introduce shade tree diversity into cocoa landscapes and achieve biodiversity conservation in primary forests (Kjosavik et al 2013).

¹³ *ibid*

3 METHODOLOGY

Research design refers to the entire process of research - from conceptualizing a problem to writing the narrative; and not simply the methods used, such as data collection, analysis and report writing (Bogdan and Taylor in Creswell 1998: 2-3). In other words, research design is “the logical sequence that connects the empirical data to a study’s initial research questions, and ultimately, to its conclusions” (Yin 1989:28). Does the evidence collected allow the researcher to clearly answer the research questions posed at the beginning of the study? This chapter presents the process of gathering data for the study. In doing this, we will discuss issues ranging from our experiences before, during and after fieldwork. To be more specific, discussions will range from how our field experience began, methods used in collecting data, rationale for adopting a qualitative approach, reliability and validity of qualitative studies, as well as ethical considerations. The chapter finally ends with a reflexive look at the whole data gathering process, and a discussion of the limitations of the research.

3.1 Preparing for the field

Field research is the systematic study of ordinary events in the settings in which they occur (Bailey 2007). It is always helpful to do some pre-field background checks or investigations before the researcher sets foot on the field. Fieldwork helps the researcher to understand the people’s activities, why they behave in a certain manner and what these activities mean to the people. This understanding is gained by collecting data, interacting with, listening to, and observing people during the course of their daily lives-usually in some sort of setting such as classroom, office or the marketplace (ibid). In spite of the researcher’s personal accounts, it is wise, as a starting point, to read and locate as much information on the topic in the library before attempting entry into the field. One might also begin, as suggested by Vallance (cited in Berg and Lune 2012: 214), by considering friends and social networks to see if anyone you know can offer a referral into the group you would be studying. That being said, field research involves more than just hanging out with and watching people. It is a more complicated act, which requires the researcher to follow clearly defined procedures. Before we went to the field, contact was made with some key persons, one of whom was a colleague who had just

conducted fieldwork in the area, on the potential of REDD+ in the Aowin district¹⁴ and another was a key informant and an expert in Ghana's forestry sector. Through these people, we got relevant information about what to expect, and practical challenges on the field. Once on the field, this information proved useful, as we knew and were expectant of some of the challenges that occurred, and had put in proactive measures to curtail them. We also adjusted and adapted pretty quickly to the socio-cultural dynamics in our new environment.

3.2 Qualitative Research

Qualitative research refers to “the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things” (Berg and Lune 2012:3). Creswell (1998: 15) adds that it is “an inquiry process of understanding based on distinct methodological traditions of inquiry that explores a social or human problem. He further adds that through it, the researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting”. The difference between qualitative and quantitative research is that, qualitative tends to assess the quality of things through the use of symbols, concepts, pictures, words and descriptions; whereas quantitative research relies mostly on numbers and units of measurements.

Qualitative research method was adopted for this study. In explaining preferences for the REDD+ compensation program, there was the need to understand people's motivations and reasons for their choice of compensation format. In some communities, people told narratives of how the forests have been managed in the past and why it is depleting today, and gave suggestions on how to manage forest sustainably in modern times. People also spoke at length about how depriving them of access to the forests would impact on their livelihoods, and what alternative strategies they would prefer. Although quantitative tools could have provided a quantified value of say, how many people are in support of REDD+ compensation and how many are not, it would miss out on the meanings ascribed to reasons given, something that is aptly captured using qualitative tools.

To a large extent, qualitative interviews may appear to be similar to ordinary conversations, but they differ in some ways. The difference is that during interviews, the interviewer listens

¹⁴ Refer to Konlan, S. S. (2012) *The potential of REDD in Ghana- A study of a Pilot Area, Aowin Suaman District in the Western Region, Ghana*. UMB: Published master's thesis, Ås: Norway. This pilot study was phase one of the REDD+ project in Ghana, while this study is phase 2.

with more rapt attention, and picks up on certain key words or phrases. Again, the researcher watches out for certain nonverbal cues such as facial expression, body language and hand gestures (Berg and Lune 2012). Through observation, the researchers easily understood responses given through the use of facial expressions.

3.3 Sampling

The sampling process is vital in both qualitative and quantitative research. It is the wish of most researchers to interview as many people as possible, but time and resource constraints make that impossible in the real world. It therefore becomes imperative to select a small group that represents the larger population- the sample (Bryman and Cramer, 1995: 99-114, Bulmer 1993b). There are many types of sampling that social science researchers use to select informants for their studies. These include convenience sampling, snowball sampling, purposive sampling and quota sampling. In this study, researchers used the purposive and snowball methods. Purposive sampling is a process where researchers choose their participants or informants based on the purpose of the study. In this sampling method, only those people who have a direct bearing on the research questions are selected from the population to partake in the study. Stake (1994) notes that many qualitative researchers prefer to use this sampling method. The aim of this study is to elicit views, concerns and fears of farming communities on preferred compensation formats as part of REDD+ interventions in the Aowin district in western Ghana. In order to achieve this purpose, all the six communities which have been chosen as part of the pilot study under REDD+, are all cocoa farming communities located in the high forest zone of Ghana, exhibit similar characteristics, and their livelihoods depends largely on the direct or indirect use of the forests. Therefore, they had direct relevance to the research questions, more than any other group.

The second sampling method used is the snowball method. In this method, the researcher identifies people with relevant characteristics attributes to his topic and interviews them. After that, the respondents are asked for referrals to other people who possess the same qualities as them. In effect, it is a chain of subjects driven by the referral of one respondent of another (Berg and Lune 2012). The *snowball* sampling method was employed in this study, especially with regards to key informants and individual interviews. For example after conducting an interview with the Unit Committee Leader in New Yaakase village, he directed us to the Chief of Boinso whom he knew personally. This made it easier to get access to the

chief and interview him. Under normal circumstances, it would have taken a day or two after booking an appointment with a chief, to meet with him, since chiefs are quite powerful in the traditional hierarchy. Using the snowball sampling method is therefore convenient and saves a lot of time.

3.4 Methodology and methods of data collection

Research methodology involves the methods, steps and principles employed to scientifically study a research problem. Bailey (2007) asserts that methodology does not only involve techniques of data collection such as interviews or focus groups, but it also embraces the decision about whether to carry out a qualitative or quantitative research. The main methods used to collect data for this study include focus group discussions (FGDs), individual (in-depth) interviews and key informant interviews. In addition, some form of observation was used in gathering data. Looking at the nature of our research questions, these methods were best suited to provide answers.

3.4.1 Interviews

Of all the experiences on the field, conducting interviews was the most worthwhile. An interview is a method of data collection where the researcher asks questions with the aim of seeking information directly related to the research. Bailey (2007) distinguishes between three types of interviews: structured, semi-structured and unstructured. In structured interviews, the researcher asks in a specific order, precise questions of interest to him. It is the responsibility of the interviewer to keep the respondent on track, so that he does not deviate from the topic. The same questions are asked each respondent with the view of measuring their responses by a common standard. Semi-structured interviews allows the researcher to enjoy some flexibility on how the interview is run, while at the same time giving him some control over what to ask. In most semi-structured interviews, the researcher has some form of interview guide with broad topics from which to ask questions. But is it the flow of the interview, rather than the structure in the guide that regulates how questions should be asked.

Unstructured interviews are informal and similar to normal conversations. There is much flexibility in the way these interviews are structured; the respondent has the freewill to talk about anything related to the topic, as long as he or she does not stray too far away from the topic. Since researchers often come to realize what is useful to them during the analysis phase

of research, giving a wide liberty to respondents can result in very relevant caches of information (Bailey 2007:96). There is also no defined time or limit to end the interview, it can last from some few minutes to two hours.

In collecting data for this study, combinations of semi-structured and unstructured interviews were used. Researchers used interview guides that listed the broad topics and some questions to ask, but they were free to modify them if it appeared that respondents did not understand the questions, or answers were not forthcoming. Also, respondents had the freedom to talk about a wide range of related issues that they perceived as relevant to the research. Follow-up questions and examples given by respondents opened our eyes to new areas of knowledge that we had not necessarily thought of. Thus researchers got very rich, detailed and valuable information/data. For example, there were a lot of narratives about how the climate has changed in recent years and how local farmers are coping with the change. In all, 11 focus groups discussions, 6 key informant interviews and 10 individual interviews were conducted across six communities.

3.4.2 Interview Guide

“A guide is *not* a tightly structured set of questions to be asked verbatim as written, accompanied by an associational range of pre-worded likely answers” (Lofland and Lofland 1995: 85). It is rather, a list of things to be sure to ask about when talking to the interviewee. Using the interview guide on the field helped to save a lot of time, especially with the focus groups. In each of the communities, the same interview guide was used, respondents were asked similar or the same questions. The interview guide was a form of check on both researchers and respondents, so that none diverted from the more relevant topic of the research.

3.4.3 Key informant interviews

According to (Kumar 1989), key informant interviews has to do with interviewing a select group of individuals who are likely to give needed information, ideas, and insights on a specific subject. A key informant is a person who provides important guides to insider understandings in a group and can direct the researcher to information and relevant contacts. There are two underlying features of key informant interviews. Firstly, it involves interviewing only a small number of people, who are selected on the basis of having information or ideas that can be solicited by the interviewer. Secondly, key informant

interviews are essentially qualitative interviews that are conducted by the use of interview guides that lists topics to be covered in the course of the interview. The interviewer frames the actual questions in the course of interviews. These interviews mainly have an unstructured, informal nature, are in-depth and resemble a relaxed conversation between interviewer and informant. The interviewer investigates informants to give more information while taking down elaborate notes (Kumar 1989). The meanings or information provided by the key informant may be erroneous or misleading. Hence, reliance on multiple informants ensures validity of information.

On the field, key informants provided us with richly empirical and a deep understanding of issues that we wouldn't have been able to access by ourselves or through FGDs. The purpose of conducting these interviews was to gain a deeper understanding into issues of forestry management and how the introduction of REDD+ compensation would impact on the peoples' perceptions of forestry management and on their livelihoods. Examples of key informants interviewed are chiefs, queen mothers, unit committee members, assemblymen, chief farmers, policemen, forest guards and range supervisors. Key informant interviews was most ideal for answering our research questions, because first of all, informants had information pertaining to the existing organizations, institutions and socio-economic conditions of the communities. Informants also had knowledge pertaining to the general characteristics of the target population, important information such as their occupations, religious inclinations, values and beliefs.

Again, according to Kumar (1989), key informant interviews are employed when researchers want to know the underlying motivations and attitudes of a target population. More importantly, key informant interviews can help establish not only what people do but also why they do it, thus, their motivations behind their actions and inactions. Such interviews are excellent for detailing people's reasons for their behavior and their understandings or misunderstanding of issues. Our study sought to uncover not just what people would prefer as adequate compensation, but more importantly why they would prefer particular types of compensation to others.

3.4.4 Focus group discussions (FGDs)

Babour (2008) defines FG as “an interview style for small groups of unrelated individuals, formed by an investigator and led in a group discussion on some particular topic or topics”. Focus group interviews are appropriate when investigating motivations, decisions and

priorities (Berg and Lune 2012). This was the main data collection technique employed in the study. We sought to elicit people's opinions and perceptions on suitable compensation for their loss of access to forests, change in land-use practices and for engaging in other mitigation activities.

After formally introducing ourselves and explaining the purpose of our visit, we sought permission from the groups as to whether they were willing and interested to discuss REDD+ with us. We started out by asking if they have ever heard about the REDD+ program, whether someone had explained to them that their area has been selected under a national pilot program, and so on. All the FGs informed us that they had not heard about REDD+ and they did not know anything about the program. We then proceeded to explain about climate change-related issues and REDD+. To a large extent, the participants were largely perplexed and apprehensive on many counts - were their forests going to be seized from them? Were there going to be restrictions to their use of the forests? What happens to the future generation then? These and many more were the questions that we were asked repeatedly. Both men and women equally expressed such concerns. We had considerable difficulty in explaining to them the present and future situation vis-à-vis REDD+, given that they lacked any knowledge and clarity about the program.

One of the main reasons behind our use of FGs is that views should be sought from communities themselves, rather than offering a prescribed survey or set of categories. Focus groups could capture important aspects of people's m in the REDD+ project in a way that traditional surveys could not. It is this reason-giving characteristic of FGs, that informed our choice.

Furthermore, a focus group discussion, in contrast to a survey, provides flexibility to define the categories and options and explore their advantages and disadvantages. It must, however, be acknowledged that individual/ household surveys have the advantage of reducing the risk of people being influenced by others when responding. At the same time, good facilitation of the FGDs can also help to mitigate this risk. In this study, it is important to be aware that the objective of the FGDs was not to gather individual preferences in isolation, but rather the preferences of individuals in a group setting; and as part of a group, they might be influenced by other group members. Consensus reaching is not a defined objective in FGDs, as individuals are free to change their views on the basis of logical arguments. An important issue of concern, however, is how power dynamics influence

the position and views of individuals. The researcher must take this into consideration. Focus groups were selected keeping in mind the diversity of the ethnic groups living in the study area, the gendered nature of preferences and responses and existing power relations between women and men. It is important to say, however, that both surveys and focus group discussions may suffer from politically sensitive and strategic response behaviour.

In all, a total of 11 focus group discussions were conducted in the Aowin District of the western region, Ghana. These discussions were conducted in a total of six cocoa-farming communities: Jensuu, New Yaakase, Adonikrom, Boinso, Sewum and Asantekrom. There were three main criteria based on which participants were selected for these discussions (see Table 1 below). First and foremost, focus group participants were selected based on whether they were migrant or indigenous cocoa farmers. Second, selection was based on which ethnic group these participants belonged to. This was to see if there were any differences in responses given by different groups, and if there was, the extent to which their views were different or similar to each other. A third and important criteria was gender. Given the patriarchal gender relations in the communities in general, we wanted to see how cultured gender differences would reflect in responses given in a *mixed* gender group setting, as against responses given in *separate* gender group settings. Following the above, our FG in Sewum was mixed - made up of men (13) and women (10). The purpose of conducting a mixed interview was first of all, to see if responses given by for example, men would be influenced by the views women, and vice versa. More importantly, we put both men and women in one group so as to explore if the generally held view that men were more knowledgeable in agriculture than women, still holds, and if it does, to what extent.¹⁵ The district is essentially a cocoa-growing area, and almost all the communities studied have a certain degree of forest dependence. We could have used other criteria such as household income and age. However, data was collected within a limited time and resources, as such, this could not be done. Our classification of the groups was done in consultation with the local partners, according to criteria that were most likely to influence preferences. Therefore, as far as our research questions were concerned, this was the most relevant criterion for selecting focus groups.

As emphasized by Holstein and Gubrium (1995), ‘even the same person can hold several

¹⁵ There is a commonly held view in Ghana that men are more knowledgeable when it comes to farming. Even though throughout our interviews, we observed that women sometimes owned larger cocoa farms than men and were the heads of their households, we wanted to test this hypothesis notwithstanding.

truths'. What this means for our study is that, even though respondents come from the same ethnic group, they could have different views on issues. For example, some respondents who intermarry into other ethnic groups may change their opinions about something once they marry (influenced by their spouses who most probably hold the same opinions on these issues).

FGDs, which were mixed with members from different ethnic groups, was another criterion adopted. This is because although they may come from the same part of the country, they may hold very different views on certain issues. Also, ethnic groups have their own stereotypes and preferences. For example, in the Boinso FGDs, there were eight different ethnic groups from the same part of Ghana (northern regions).

Advantages of focus groups

In terms of number of participants, costs and time, it is highly flexible. It is easy to gain a huge amount of information from a large group of people, within a short period of time. For instance participants were gathered for all our 11 FGs within a considerably short period of time, with little difficulty. We had to turn away a few people because the numbers were too large in some communities.

Focus groups also are a good way to generate more insights into issues that were not previously well understood. Researchers have the opportunity to understand more comprehensively how members of a group decide on, or alter their responses and conclusions about topics. Further, focus groups have the advantage of allowing people more time to reflect on their responses, and to recall some experiences. Something that one person says can easily spur the memories and opinions of others in the group. Listening to others speak allows each person, upon reflection, to rethink, amend or expatiate initial responses given (Lofland and Lofland 1995).

To add more, focus groups are useful when there is a power gap between the researcher and his subjects. More often than not, the researcher has more power than the respondents he is interviewing, as was the case in our study. It allows groups of peers to express their views. Thus when one group feels secured of being in the midst of people who are sharing their feelings and experiences, it boosts the need to share theirs too (Morgan and Krueger 1993).

Depending on how skilled the researcher is, focus groups can draw out the feelings and ideas of group members (Stewart et al. 2006). The researcher can get non-verbal cues in the form of body language, eye contacts, nodding of head and small conversations between people in the group.

On the field, observing all these non verbal cues did not only inform us about the peoples thoughts, but we observed the way they felt about particular issues. For instance, in Jensuu, the women who took part in FGDs resorted to the use of non verbal cues than speaking out, because the men counterparts were very close by, waiting for their session and were watching the women constantly. The observation was that they were not comfortable to speak about financial issues when the men were looking and listening. Our study sought to collect data on the views and perceptions of people regarding what payment formats they will prefer under the REDD program. Questions to respondents captured the issue of respondents' perceptions of REDD, motivations to reduce forest degradation and deforestation, views on compensation formats and so on. Life stories shared by some respondents were a great learning tool. The researchers gained a deeper understanding of the respondents' relationship with the forests and cocoa farms, and how that influenced their understanding of REDD+.

Disadvantage of using focus groups

The main negative side of using focus groups, and what we encountered in collecting data is that members in the group are prone to be swayed by the ideas of one person or other people. In Sewum, where there was mixed interview of men and women, group influence was the greatest. Although some women gave responses, it was clear from observation that the men did not take their responses seriously. It was only a few leaders who were always talking. However, after the interview, in a more informal atmosphere, some came to us to tell us their honest opinions or to take back what they said in the group. For instance, immigrants said they would go home if compensated. This was the response given when they were in a group. After the FGD, they came to give me details of how some private investors had sent helicopters to mark their farmlands as potential mining grounds, and had started mining in fact. Therefore their lands are not good for farming anymore. So the real reason why they would go home is because their lands are not fertile anymore.

Table 3- Ethnic group characteristics

	Community/Village	Ethnic group	Women/men/mixed	No. of participants
FG 1	New Yaakase	Brusa	Men	15
FG 2	New Yaakase	Brusa	Women	8
FG 3	Boinso	Mixed (Kusaasi, Gruma, Dagaaba, Dagaare, Frafra, Busanga, Bimoba, Wangara)	Men	17
FG 4	Boinso	Mixed (Kusaasi, Gruma, Dagaaba, Dagaare, Frafra, Busanga, Bimoba, Wangara)	Women	9
FG 5	Sewum	Ashanti	Mixed (W+M)	23
FG 6	Adonikrom	Ewe	Men	13
FG 7	Adonikrom	Ewe	Women	10
FG 8	Asantekrom	Fante	Men	12
FG 9	Asantekrom	Fante	Women	8
FG 10	Jensue	Sefwi/Brusa	Men	9
	Jensue	Sefwi/Brusa		

FG 11			Women	12
Total				136

Source: Fieldwork 2012

3.5 Reliability and validity

There is a common notion that issues of validity and reliability are only applicable to quantitative research. However, the concepts of reliability and validity are also important in qualitative research. Validity in research refers to the accuracy and truthfulness of scientific findings (Le Compte and Goetz 1982: 32). That is, it looks at how accurate or how precise a research finding is. Did the research appropriately measure what is set out to measure? Some researchers have used the term *trustworthiness* in place of validity (Guba and Lincoln 1994). Trustworthiness necessitates that the research is conducted and presented in such a way that the results of the research is believable to the reader, and he is convinced that the research is worthy of his or her attention (Lincoln and Guba 1985). Being trustworthy does not necessarily mean that the reader should agree on everything with the researcher, it means the reader should be able to see clearly how data was collected, and arrived at the conclusion that he or she has come to. Bailey (2007) identifies two types of validity- internal and external validity. Internal validity refers to the extent to which research findings are a true reflection of reality, and not outside variables.

Threats to internal validity stems from personal biases of the researcher. It is impossible to not have any biases at all, but the challenge is knowing exactly what biases you have before entering the field. Too much personal bias can affect the nature of your data collection, or the results of your work. External validity refers to how the research findings or the reflections can be generalized or be applicable in relation to other studies or across other groups. Patton (2002) advocates the use of triangulation for strengthening validity by suggesting a combination of different methods, two or more data sources, theoretical perspectives and methods of analysis of data. Triangulation is the use of more than one method or source of data in studying a social phenomenon (Bryman 2008). In this study, the combination of

FGDs and interviews (key informant and individual) added some validity and credibility to the data. Thus, where responses in FGDs were not satisfactory or uncertain, we asked the key informants for more clarification and expertise views. The main aim of doing this is to crosscheck our data. Semi-structured questions were posed in key informant interviews where informants gave more straight to the point and concise responses. Focus groups provided all the detailed descriptions, challenges and motivations of the people toward the compensation program. Some form of observation was also used in order to capture the mood and feelings of respondents, especially where they could not communicate verbally due to various reasons. The use of semi-structured and unstructured interviews provided a form of validation to responses. In terms of theory, we have used different theoretical perspectives and contextual frameworks to support our work. To complement our primary sources, data was collected from secondary sources such as textbooks, websites, articles and journals. All these added some validity to the data collected, and consequently to the findings of this thesis.

Reliability is concerned with the consistence and repeatability of research outcomes over time. This refers to both the respondent's account from the field, and the researcher's ability to collect and record data accurately (Selltiz et al 1976:182). In order to ensure reliability, the researcher must be concise and clear about the research process in general (sources of data, methods of data collection, analysis process, and storage of data). This is important in case of any doubt, and also for future reference.

3.6 Gaining Access

Getting in is defined as "various techniques and procedures intended to secure access to a setting, its participants, and knowledge about phenomena and activities being observed" (Friedman 1991, cited in Berg and Lune 2007: 107). Access is a process that involves the researcher being able to acquire consent to go to where he wants, observe, and read documents he wants, for as long as the research lasts (Glesne 2006: 44). Gaining access is not for the sole purpose of gathering information, the very process of getting in affects what information is available to the researcher. Entry to a research setting can prove difficult, thus researchers need some level of flexibility in their tactics and strategies in order to overcome these difficulties (Bogdan and Knopp Bilken 2003; Lofland et al. 2006 and Shenton and Hayter 2004 cited in Berg and Lune 2012: 213).

The researcher must be able to gain access and establish rapport with his subjects in order to gain their confidence and trust. When respondents gain the trust of researchers, they do not hold back, they tend to give honest and detailed information. For instance, when we asked a group in New Yaakase about whether they use the forest for any other activity apart from farming, most people responded no. At a latter stage in the interview, respondents had built so much trust and rapport with the interviewer that they opened up about the use of the forests, and said that most of them used it for charcoal burning and hunting. Even before this honest response came, the facial expressions gave an indication that burning of forest for charcoal and illegal logging is a very common activity that at least about 90% of the people are engaged in (Fieldwork, August 2012). A *gatekeeper* often facilitates access to a group. Gatekeepers are individuals or groups who are in positions to grant or deny access to a research setting (Feldman, Bell and Berger 2003; Hagan 2006). Two officials from the local office of the Forestry Commission – a Forest Guard and a Range Supervisor – served as our Gatekeepers or facilitators in all six communities. They knew the communities extremely well and led us to the chiefs and opinion leaders, who in turn directed us to the appropriate ethnic groups for the focus group discussions.

All discussions were conducted in *Twi* (which is understood by one of the team members), but at times the facilitators had to translate certain terms to the respondents in the *Brusa* language (common to all the communities). This helped to facilitate the discussion process. For some FGDs, the facilitators also assisted translation of responses from the local languages to English. Gatekeepers are vital to the research process, especially in the field. However, they can be sources of miscommunication and mistrust between the researcher and respondents. The negative side of using gatekeepers was encountered in our fieldwork:

In the middle of the FGD in Sewum village, respondents began demanding for money. This was because according to one respondent, the Gatekeeper had implied to them, in a previous meeting, that anyone who participated in the FGD would receive a sitting allowance. Because we were not present at previous meetings by the Assemblyman with the people, we could not tell whether he had explicitly promised them sitting allowances or whether it was a case of miscommunication. When it was explained to them that the information was for academic purposes only and not to make money, some of them got up and left. The good thing is that this did not affect

the quality of data in any way, as we managed to get other respondents to fill their seats.

3.6.1 Power relations and conflict of interest

Power and position issues between researchers and respondents are difficult to avoid in qualitative studies especially in the field of Development Studies (Scheyvens and Storey 2003). Power imbalances can be on two levels- real and perceived differences. Real differences would involve things like level of education and economic situation. Perceived power imbalances, however, is in the minds of respondents. This makes them feel inferior to the researchers. This was our experience in the field. In some communities that we went to, some individuals were threatened by our level of education, and they perceived that once we were living and schooling abroad, we could not appreciate their challenges. An interesting twist to this is that, respondents who had some form of education were even more threatened by us, than did those with little or no formal education at all.

Scheyvens and Storey (ibid) again opine that there is bound to be a conflict of interest situation when students conduct home-based research. In individual interviews with an official from the forestry Commission in Accra, it was difficult to get information concerning a perceived “sensitive issue”. For example, on questions that bothered on bidding for timber concessions, information was not forthcoming. This is because there is the general belief is that some officials favour their cronies.

3.7 Ethical Issues

The sophisticated nature of methods of data collection, organization and analysis over the past decades have made social research more expansive, complex and penetrating. This has come with increased awareness and concern over issues of ethics involving research and researchers (Berg and Lune 2012). To a large extent, research ethics revolve around various issues of harm, consent, privacy and the confidentiality of data (ASA 1997; Punch 2005). In this study, the ethical issues are discussed both on informed consent, confidentiality, and treatment of data.

Informed consent means the knowing consent of individuals to take part in an exercise of their choice, free from any element of fraud, deceit, duress, or similar form of inducement (Berg and Lune: p.90). Before interview sessions, the gatekeepers and researchers sought due consent of participants by explaining to them what the research was about, the objectives and how data from the research was going to be used, and by whom. This ensured that participants were fully aware of what roles they would play, and so participated out of their own freewill. There was no coercion or force applied. Neither was there any form of deception, to gain information. Throughout the whole research, it was only in one case that a key informant declined to continue after starting an interview with him. There was no reason given for this decision, he had just lost interest and changed his mind about partaking. The quality of our research was not negatively affected in any way, as we found another informant with similar characteristics to interview. A similar incident occurred in Sewum, when a FGD was being held. In the middle of the discussions, about half of the group members (women) got up and left. Their reason was that it was late at night and they had to go and cook dinner for their husbands. One of the women later confided in the gatekeeper and told him that the real reason why they left was because they thought they were going to be paid sitting allowances. It was realized that this might have been a miscommunication on the part of the Gatekeeper, in the process of translating from English to the Brusa language. At the end of it all, we had more men than women in that focus group. The quality of the data may probably be more skewed towards the male gender, although it was initially supposed to be a mixed interview (of equal number of men and women).

Confidentiality: In social research, “assurance of confidentiality” is the promise that real names of persons and places will not be used; or in situations when it is necessary to use them in the research, they will be replaced by pseudonyms (Lofland and Lofland 1995: 43). Being aware of this, we made active effort to remove from the research records, any elements that may make it easy to identify a participant or subject. On the field, sometimes, participants worried about the protection of their identities, particularly when they spoke on sensitive issues such as politics. Thus, constant assurances of confidentiality were given, and this helped to build trust and rapport. As in many cases, the impression gathered in most of the focus group discussions was that researchers were sent by the ruling government to collect data that would be used for political gains. In our case, the fact that we had come from abroad made this even worse. The researchers with the help of gatekeepers and some key informants

explained that data being collected was only for academic purposes. Nevertheless, some people declined to partake in the focus groups due to a previous bad experience. The general notion, as expressed by a farmer in one of the FDGs, was that: “ *You researchers always come with your big English jargons to collect our village knowledge. You promise us heaven on earth, yet we see nothing after you leave, until the next year when another researcher would come here*”.

The impression we got from this was that there had been previous researchers in the area who had promised the people that their research results would make a huge change in the lives of local people, yet they see nothing happening. We explained to them that we were only students who were seeking to understand their perceptions on forest management and how they think the REDD+ compensation program would reduce climate change and impact on their livelihoods. We added that we were not in positions to change their lives but the outcome of our study may determine if the REDD+ compensation would be started in their communities or not. We were careful not to make any promises, nor deceive them about our actual use of data.

Confidentiality of research participants can again be ensured by presenting data as general information, rather than specific information. During some key informant interviews, some section of the participants (most notably local politicians) were somewhat reluctant to give certain information because they deemed it as being politically sensitive. In one of such interviews in Boinso, it is recalled that, an Assembly Man/ local politician remarked after being asked about government’s role in electrification of the district:

“Madam, this information is not meant for public knowledge. I am a politician and belong to the opposition party. I will respond to you, but if you by any chance associate me with this information in your final results, I shall not take it lightly.” (Fieldwork, August 2012).

Treatment of data: We made it known to the people that we were going to record their voices using a tape recorder, and they were comfortable with that. All materials used to aid data

collection: books, notepads and tape recorders were kept safely and the responses were also treated with much confidentiality (Friedman 1991, 2007 in Berg and Lune 2012: 107).

3.8 Researcher roles: Insider or outsider?

The qualitative researcher's perspective is perhaps a paradoxical one: it is to be acutely tuned-in to the experiences and meaning systems of others—to indwell—and at the same time to be aware of how one's own biases and preconceptions may be influencing what one is trying to understand. (Maykut & Morehouse, 1994, p. 123).

Important in any research is the issue of how the researcher is able to position him or herself in order to gain access and information. The status of a researcher is defined as the position an individual occupies in relation to the entire society (Linton 1993:113). In qualitative research, the researcher is usually faced with the role of being an insider or outsider. An insider status is when the researcher is a member of the cultural group that he is studying. *An insider* refers to a researcher who conducts research with populations of which he or she is also a member, and with whom they have or share similar characteristics (Kanuha 2000). Similarity may be in terms of identity, language, culture and experiences. *Outsiders*, however, are not members of the group they are studying, and do not have characteristics in common with respondents. What role a researcher adopts could affect his access to participants, the quality of responses he gets and ultimately the quality of his research. Whether or not a researcher can gain access to his participants depends on his role as an insider or outsider.

During the fieldwork, we assumed both the roles of an insider and outsider. We considered ourselves as insiders because we are of Ghanaian origin. Again, we spoke the local language of a majority of the people (Twi), and our own mother tongue (Ewe), which was spoken by a section of the local people. As nationals of Ghana, we were privy to certain kinds of information that a “non-Ghanaian” would not be able to obtain. To a large extent, although we were from a different tribe, respondents accepted us as one of their own. Being seen as an insider helped us to get close to the people, and gave us a much more in-depth understanding of issues. We could also relate to some cultural experiences that respondents shared. As a

result, a high level of rapport was built between respondents and us¹⁶. They trusted that as one of them, there was no way we could betray the trust and confidence they had reposed in us by giving out sensitive information about them to journalists and politicians. They opened up about their experiences and fears. Thus, our statuses as inside researchers gave us a certain amount of legitimacy. Insiders are nevertheless bound to face some challenges with regard to questions of objectivity, because they know too much or are too similar to the group they are studying.

On the other side of the coin, we were perceived as outsiders. First of all, our status as students studying in a foreign country worked to our disadvantage. Some people would just not open up, because they did not trust where information about them was going to end up. The fact that our Supervisor travelled to the field with us substantiated this perception even the more. We managed to reduce this perception by constantly reassuring participants that we were just students and that information gathered was going to be used just for academic purposes. In addition, we told them that their opinions could help in formulating a national REDD+ policy, which could benefit them if the REDD+ project continued in their district. Once they knew that something positive could come out of the study to help them, they opened up and gave detailed life stories, some even beyond the scope of this study.

Further, we were seen as outsiders due to the fact that I had never been to the western region, nor lived in a farming setting before. Therefore, most of the terms related to farming were new to us. For example in almost all the FGDs, respondents would keep mentioning farming system “*d) ma y3nky3*” (weed and divide) which they expected us to know about. Our constantly asking them to explain that to us prompted one of the respondents to exclaim:

“Ei¹⁷! How can you people not know about this system? And you are Ghanaian? Anyway, I don’t blame you too much, you city people”.

¹⁶ In this thesis, the terms respondents, participants, and subjects have been used simultaneously to mean the same thing.

¹⁷ “Ei” is a term used in most Ghanaian languages to express surprise or dismay at something.

After this, there was a short session of educating us on this farming system. Furthermore, because we could not speak nor understand any *Brusa*, we did not understand what the gatekeeper was translating to the people some times. There were instances of miscommunication. Another way in which we reduced the perception as outsiders was to appear in simple clothing, and avoid the use of big jargons. In spite of all the challenges associated with the perception of being an outsider, it gives the researcher the needed distance to observe things from an objective view, devoid of any personal biases and preconceptions. Conducting fieldwork in an unfamiliar setting, allowed us to learn about and experience the Western Region of Ghana as well as gain a great depth of knowledge from our participants.

3.9 Reflexivity and Limitations

The process where researchers reflect on their actions and values during research and the impacts it may bring to their study constitutes reflexivity (Robson 2002:551). The major risk associated with reflexivity and of “writing about writing” is that it could lead an ignorance of the wider world, where these accounts were written (Scheyvens and Storey 2005).

Limitations of a research refer to the challenges encountered in undertaking the research. In the conduct of empirical research, one must recognize the presence of real world constraints. To begin with, the people were not aware of the REDD+ program and also that their forests had been selected under REDD+ pilot program. This was a herculean task as we encountered difficulties in obtaining answers based on a correct understanding of what REDD+ entails. Therefore, the reader is cautioned that the results of this study should be read and interpreted keeping this aspect in mind. There had to be a briefing at the beginning of every FGD to explain to the people what REDD+ is about, and the fact that their communities had been chosen to partake in the pilot study. This caused some delays, as we were pressed against time, and the people had difficulty understanding initially. However, once they were clear on REDD+, the process was a smooth one. One other limitations of this study concerns in general, the limited time we had to collect data. We had to be critical and selective in how to divide our time between the various focus groups to be interviewed. This became critical especially toward the end of the process. Also, the timing for interviews in the cocoa producing communities was not favourable to the farmers. This is because it was during the cocoa harvest season. Although we conducted all our interviews and FDGs as scheduled, we were advised by some leaders that if we had come during the off harvest season, there would

have been much more interactions. When groups schedule the FGDs for a certain time, the researchers had to be there; otherwise, the people would leave to their farms. There was an instance in Sewum where we had to schedule an FGD in the evening, around 5pm. In the middle of the discussions, people (women) started leaving because they to go and make dinner for the household. We were therefore advised to come during the off-harvest season next time.

Most of the communities are highly polarized along partisan lines. There was one incident when a fight broke out because of disagreement between two people belonging to either side of the political divide. This makes it somewhat difficult to interview them. In discussing politically sensitive issues, researchers had to be very circumspect, lest it leads to heated confrontations. In Adonekrom, it was observed that most of the people we spoke to, including the Assembly Man, belonged to the ruling National Democratic Congress (NDC) political party. The Chief on the other hand, belonged to the rival New Patriotic Party (NPP). Due to political rivalry, there were not regular interactions between the chief and the people, and this has negatively affected the development of the community. The most visible impact of this is that out of all six communities, Adonekrom was the only village without electricity.

Being a cocoa growing area, the district was prone to security threats. Some respondents recounted incidences when farmers on their way back from Takoradi, the regional capital (where they go to sell the cocoa beans), have been attacked by armed robbers.

Another limitation had to do with access to relevant legislations on Ghana's forestry sector. The majority of forest legislations were difficult to come by. Researchers had to rely on a review of such legislations in books, journals, theses and websites. Where data was available, particularly in relation to statistics on Ghana's forests, information was scattered and different gave authors gave different figures. Finally, we thought it would have been informative to interview people not related in any way to the topic at hand, but there was limited time to do so. Notwithstanding these limitations, we made the best use of data that was available to us; thus strengthening the validity and reliability of the conclusions of the study.

4 FORESTRY SECTOR IN GHANA

4.1 Background to the sector

Ghana is centrally located on the coast of West Africa. The country's land area amounts to approximately 23.9 hectares (ha) and is occupied by about 24.2 million people (GSS 2010).¹⁸The climate is tropical, warm and relatively dry along the coast. The south-western part of the country has a high mean precipitation; while the northern region is hot and dry. Ghana's forests form part of the Guinea-Congolese phytogeographical region (Derkyi 2012).

Two major types of ecological zones exist in the country, the Savannah Zone (SZ) occupying 15.7 million hectares (ha) of the total land area found in the north of the country; and the tropical High Forest Zone (HFZ) located in the south and occupying 8.2 million ha of land (Oduro et al 2004).¹⁹

Hall and Swaine (1981) observe in the SZ an open array/canopy of trees and shrubs, with a variety of grasses. Approximately 9.4 million ha of the SZ consists of woodland, serving as a source of woodfuel and a limited amount of building poles for local consumption (Oduro et al 2004). According to Kotey et al (1998), woodfuel (consisting of firewood and charcoal) is the main source of energy in Ghana, catering for more than 75 per cent of the population. They estimate the annual fuelwood usage to be about 16 million m³. "Much urban fuelwood originates in the savannah and transitional zones...." (Kotey et al 1998:5).

Economic activities notable in the northern region include livestock production and growing of annual crops such as rice, wheat, cereals and other root crops. It is also the region from which Ghana gets majority of its cotton.

¹⁸ See also Oduro et al (2004).

¹⁹ See figure 4.

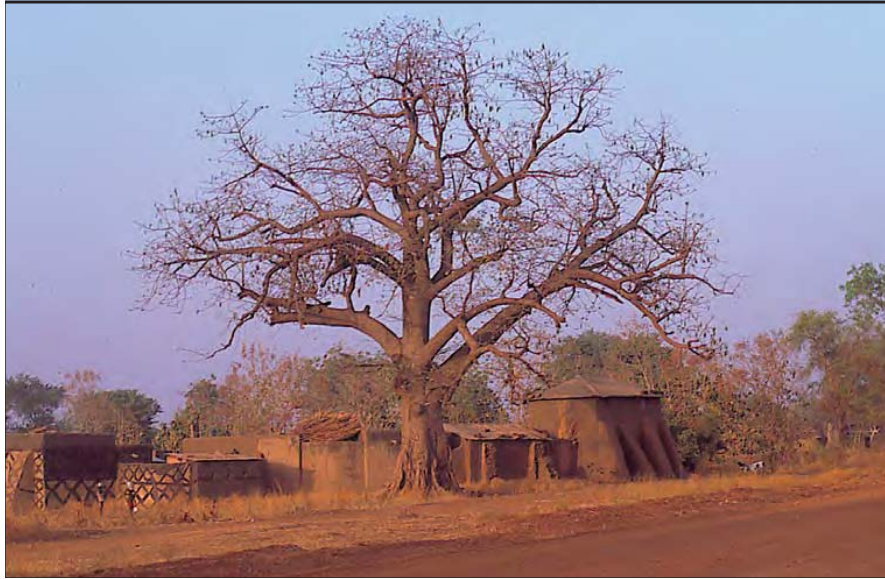


Photo: James Meyers

Figure 4: Trees in the savannah zone of Northern Ghana

Source: Kotey et al (1998)

Farmlands and fallow lands characterize the HFZ with about 20% of it being forest reserves (Nolan and Ghartey 1992, cited in Oduro et al 2004).



Figure 5: A Forest located close Kakum in Ghana. Source: Oduro et al (2004).

According to Teye (2008), the unequal spatial distribution of forests has implications for development in the country's different regions. The Northern Savannah zones that lack basic amenities and resources are generally underdeveloped than other regions in the HFZ, where majority of Ghana's export crops such as cocoa, coffee and oil palm are cultivated. It is also estimated that about 80% of people living in the Savannah zone live below the national poverty line of US\$376 per annum. Consequently, there has been mass migration of people from the SV to the HFZ, even up until today. For instance, during our fieldwork in Ghana, we observed that people from almost every tribe in Ghana is found in the study area (Aowin District) located in the south-western part of the country. They mostly work as labourers on cocoa and oil palm plantations. It is worthy to note that in the HFZ, the customary land tenure system is the predominant form of land ownership.

4.2 State of forest reserves in the country

Within the HFZ, forestlands are either reserved or unreserved. Official reservation of the forest started in 1927 under colonial rule, which led to reservation of about 11% of the country's total land area. The aim was to protect important areas of the forest; however, the colonial administration failed to recognize the authority of traditional leadership, resulting in a negative response from the traditional authority and the forest fringe communities. What worsened the situation was that they did not inform forest communities about their usufruct rights and only concentrated on the central government to protect the forest (Boakye and Baffoe 2007).

282 forest reserves, as well as 15 wildlife-protected areas (amounting to 16% of the total land) were recognized by the 1948 Forest Policy. Currently, the actual number of forest reserves in the country remains a matter of debate, as there has been little consensus on this. Hawthorne and Abu Juam (1995), Kotey et al (1998) and Teye (2008) agree that the number is 214.

According to Abebrese (2002), there are 266 gazetted forest reserves, amounting to a total of 1.22 million ha; with 200 of them in the HFZ (1.6 million ha); and 62 located in the savannah zone (Agyeman 2010). However, Boakye and Baffoe (2007) list the number of reserves in the country at 282 and 15 wildlife protected areas,²⁰ Meanwhile Affum-Boakye (1998) holds that the number is 240.

²⁰ See also (Ghana Forest and Wildlife Policy- Final Draft 2011).

4.3 Forest types in the HFZ.

Hawthorne (1993) identifies nine vegetation zones within the HFZ. They each have distinct characteristics with regards to plant species, soil and rainfall patterns. These are the Wet Evergreen, Moist Evergreen, Moist Semi-deciduous South East, Moist Semi deciduous North West, Dry Semi-deciduous Inner Zone, Dry Semi-deciduous Fire Zone, Upland Evergreen, Southern Marginal and Southern Outlier forest types. Thus, as Treue (2001) admits, the closer forests are to the south west, the wetter they are and the closer they are to the north and east, the drier they become.

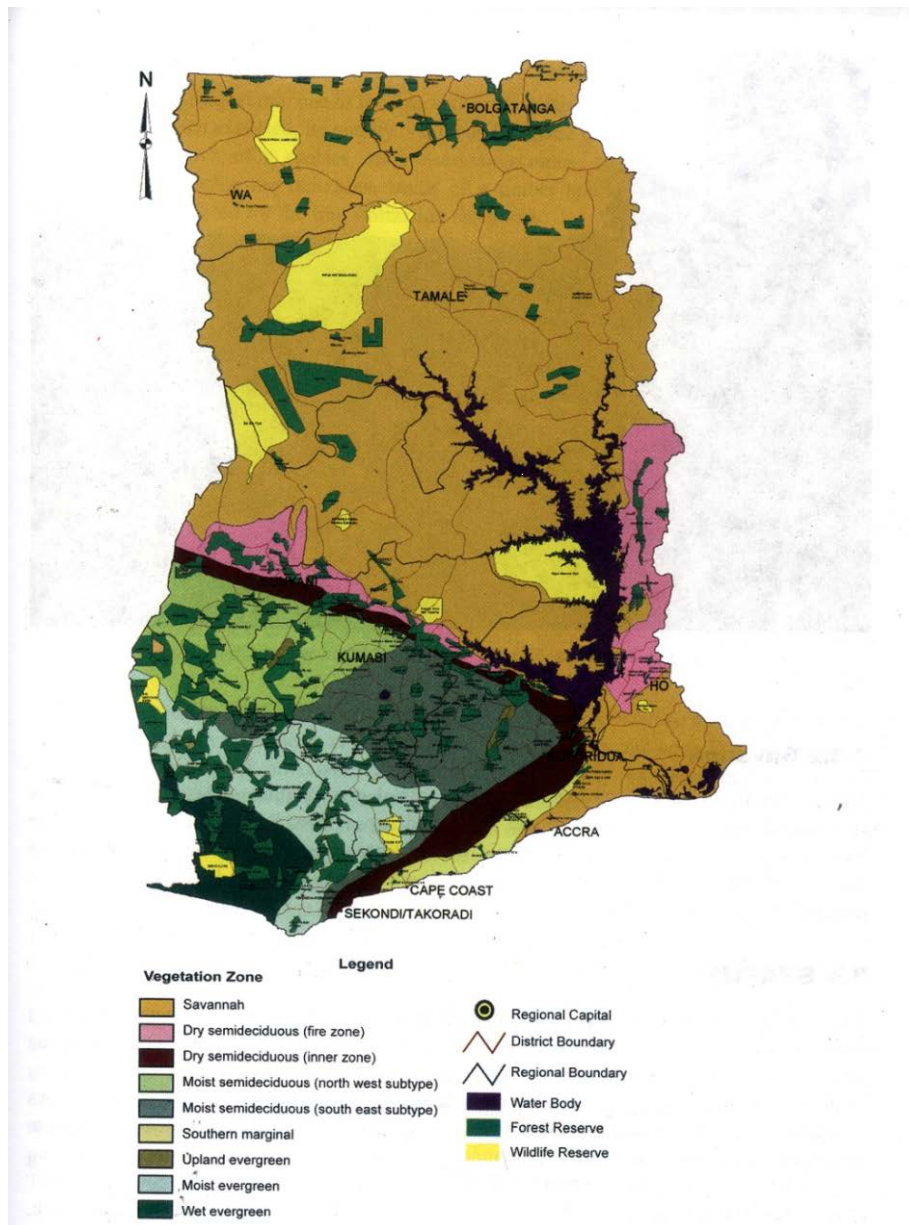


Figure 6: Map of Ghana showing the vegetational zones and species distribution in the two major forest types of Evergreen and Semi-deciduous forests, as well as the Savannah Woodlands of Ghana.

Source: Cartographic Unit, Forestry Commission, Ghana (Oteng-Amoako 2006, cited in Sarkodie Mensah, 2010).

VEGETATION ZONES AND FOREST RESERVE MAP OF GHANA
HALL & S WAINE

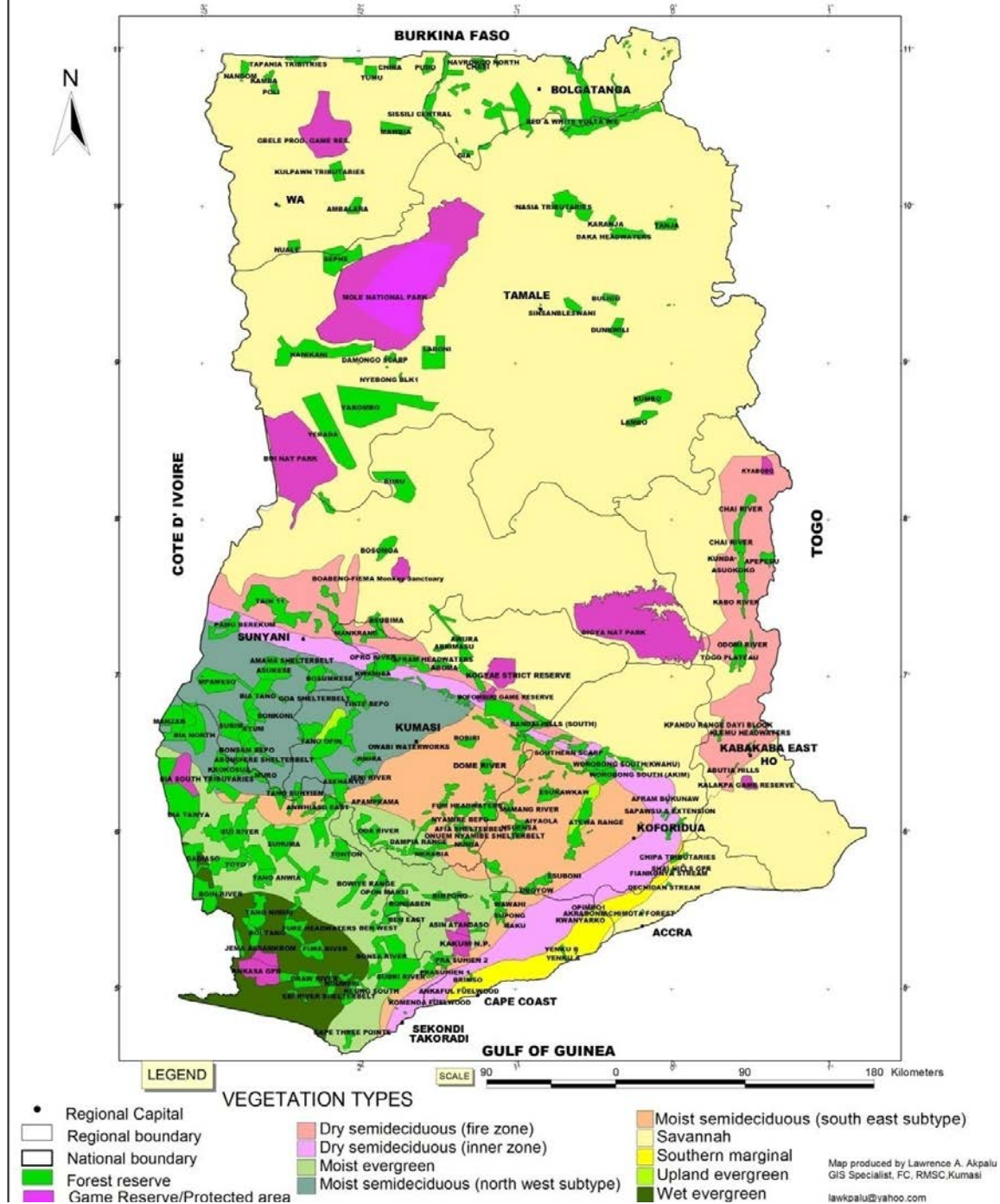


Figure 7: Map of Ghana showing the various types of vegetation in the country.

Source: Ghana Wildlife and Forest Policy 2011(2012).

4.4 Land Tenure And Ownership Systems

Kasanga (1988) defines land tenure as the laws, rules and obligations that govern/oversee the holding and/or ownership rights and interest in land. Usually the traditional political organization within a particular community in the country determines which land tenure system will be in use there.

Land is not only regarded as a material entity, it is given spiritual significance in traditional Ghanaian societies. Eye-Smith (1940) thinks that this religious attachment to land is the origin of land tenure and the ownership of the sea, lagoons, creeks, etc. among the Adas, Volta-side Ewes and other tribes in Ghana.²¹ Among the Akans of southern Ghana (where this study is conducted), land is regarded as a feminine spirit, which as Asiamah (1983) notes is “helpful when appropriated and harmful when neglected” Also, to the Akans, land is an ancestral trust that must be passed on to future generations, the chief being the administrator of this heritage. To a large extent, this may have emerged the matrilineal system of inheritance among the Akans.²²

Ghana has a peculiar and rather complex system of land tenure, which reflects the distinctive traditional political organizations, socio- cultural differences and different characteristics peculiar to each tribe, clan and family.²³ Factors that have influenced the land tenure system in the country include the disparities in natural resources between the southern and northern parts of the country, colonialism and the introduction of tree crop farming, as well as the exploitation of the country’s timber and mineral resources to feed the factories of the western world (Ministry of Lands and Forestry, 2003).

The ownership, access and transfer of land in Ghana are characterized by legal pluralism (a combination of customary institutions, local Alternative Dispute Resolution Systems – ADRS– and state institutions). In other words, the administration of land is run hand-in-hand by both customary practices and enacted laws. The 1992 Constitution of Ghana recognizes two land tenure systems:

²¹ See also Kyeremanten (1971).

²² Matrilineal inheritance occurs when children inherit from their mother’s line. Thus they trace their descent, lineage and inheritance through the mother’s line.

²³ See also Kasanga (1988).

1) Public land, which is vested in the President on behalf of, and in trust for the people of Ghana based on the appropriate provisions of the Administration of Lands Act, 1962 (Act 123).²⁴ The Lands Commission and its secretariats oversee the administration of public Lands by provisions enshrined in the Lands Commissions Act, 1994, (Act 483).

2) Customary land is identified by its mostly unwritten nature and it centers on local practices and customs that are flexible, negotiable and location-specific (Agbosu et al, 2007).²⁵ A traditional ruler, earth priest, council of elders, family or lineage heads manage customary land. Its principles derive from rights recognized by first clearance of land, conquest or settlement (Agbosu et al, 2007). About 80-90% of all undeveloped land in the country belongs to this group (Kasanga and Kotey 2001). The authors contend that practicing a dual land tenure system may have contributed to the escalation of land disputes between the state and traditional rulers, as there is always a clash of interests. Also, there have been numerous reported cases of family heads, chiefs or clan heads double-selling land to different people. In such a case, the state intervenes by way of arraigning the culprits before the court system and settling the issue.

However, the state has not always acted in the interest of the public. There have been reported cases of government forcefully taking over local peoples' lands and failing to compensate them. Recent events also indicate government compulsorily taking land that belongs to local communities and handing them to foreign investors for hefty sums without paying

²⁴ Public lands are further divided into State lands and Vested lands. State/Government lands are lands compulsorily acquired by government under the State Lands Act 1962, Act 125 for a particular purpose or in the interest of the general public. Acquisition has to be legal, and if taken from individuals, appropriate compensation given.

Vested land is bestowed on the state under the Administration of State Lands Act 1962, Act 123. The state thereby acts as a trustee for the relevant stool.

²⁵ Customary lands are divided into stool lands, family land and privately/individually owned land. Stool land is vested in the relevant stool on behalf of the community, as represented by the Chief or the Traditional or any other ruler in such capacity. Members of the land holding group have usufruct rights equivalent to a freehold. In practicality, such land belongs to members of the land

-holding group and their interests are secure, inheritable and generally alienable. The alienation of such land by the stool or family requires the consent of the holder of this interest; Privately owned land has a freehold interest and can be purchased out-right by an individual or group of persons. This type of land invariably reverts to become family land should the owner die intestate (Ollenu 1992)

compensation to the locals. The implication is that since government is allowed to lease land to private individuals, it is those close to the seat of government who benefit from these at the expense of the poor. This has always caused animosity between government and traditional authorities.

Similarly, Teye (2008) speaks of the “split ownership” system (with regards to vested land) where the right to manage land is vested in the President, while the beneficiary rights remain with traditional authorities²⁶. The government, through the Lands Commission, manages such land in “trust” for the traditional authority. The government is however obliged to pay a certain percentage of rent or revenue accrued from the land to traditional authority, which it barely does (Oppon 2004).

4.5 Uses of Land

Land is predominantly used for agriculture. This includes crop cultivation, livestock and forestry. Out of this, subsistence farmers produce about 80% of the total agricultural output (Forestry Commission 2005a). Farming methods include shifting cultivation, land rotation, “slash and burn” method. According to the Ministry of Lands and Forestry (2001), approximately 70% of all forest loss in the country is caused by unfavourable agricultural activities.

Tree Tenure And Ownership

Article 257(6) of the 1992 constitution of Ghana, states that minerals in their natural state under or upon any land in Ghana is vested in the President. Similarly, under the provisions enshrined in the Concessions Act of 1962 (Act 124), timber rights are vested in the President. Under Section 16(1-4) of this Act, all timber rights are vested in the President, except for preexisting (customary or otherwise) rights in forest reserves or preexisting concessions in unreserved areas. In Ghana, ownership rights of naturally-occurring trees belong to the traditional authority (landholding community). However, management and usage rights lie with the state. Thus, unless they are granted a permit by the FSD to do so, a farmer has no

²⁶ Traditional authority in Southern Ghana is represented by what “stools”, while those in the Northern and Upper regions are represented by “skins”.

economic right to fell naturally- occurring trees on their farms. This applies to both on-reserve and off-reserve areas.

A review of the Timber Resource Management (Amendment) Act 2002 (Act 617) has seen tree ownership rights being vested in the farmer or tree planter. This marked a huge difference in common practice in Ghana, where tree ownership was vested in the state as found in the erstwhile Timber Resource Management Act in 1997 (Act 547). After this amendment, Insaidoo et al (2012) have reported of an increase in on-farm tree planting initiatives throughout the high forest zone in the country. Consequently, state and non-state actors have taken the opportunity to encourage tree planting among small-scale farmers in off-reserve areas.

There are a couple of challenges emerging in Ghana over tree tenure and ownership. Chief among them is what Katoomba (2009) terms the lack of clarity surrounding the rights over trees and carbon. The author partly attributes this to conflicts between statutory and customary laws on land administration. Because landowners do not automatically own trees that occur naturally on their farms, they are not driven to protect them, owing to the fact that the government can give concessions to timber contractors to come in and cut them at anytime. Such operations often damage their crops, so farmers regularly attempt to destroy trees before they mature.

Under the issue of carbon rights discussed often under the REDD+ regime, since farmers will be very instrumental in retaining carbon stocks from trees if they do not fell trees on their farm, the important question is whether they will be compensated for doing so.

Deforestation

There are about 15,000 km² of unharmed closed forest remaining in Ghana, covering about 7% of the country's total land area of 230, 000 km² (Oduro et al 2004). This indicates the current state of the country's forests. About a third of Ghana's forest has been said to have disappeared between 1955 and 1972 (Hall 1987) while the average annual rate of deforestation since the turn of the century has been estimated at 750 km² (World Bank, 1988).

Ghana's forests are being degraded at an alarming rate. This often occurs in the off-reserve areas. The rate of destruction is 65000 ha per year (Oduro et al 2004). Forestland in these off reserves are mostly fallow land, secondary forests which are being converted into farmlands.

Major offenders are cocoa farmers and other food crop growers. Ghana is the world's second largest producer of cocoa. Baffoe (2010) reckons that about 350,000 ha of off-reserve areas are presently accessible for the production of timber. Off reserve areas hold the largest amount of timber trees that the economy's timber industry relies on. A study by Hansen and Trueue (2008, cited in Oduro et al 2004) implies that roughly 268 million m³ of timber harvested came from off-reserves.

The high forest ecological zone is largely biologically diverse, accounting for most of the biological diversity of the country. For instance, out of 3,725 higher plants known to be in Ghana, about 2,300 are located in the high forest zone, containing 730 tree species. Also, 185 of the 222 mammals in Ghana and about 200 of the 494 resident birds in Ghana reside in the high forest zone. Reptiles, amphibians and fishes are also known to be in the high forest zone (National Biodiversity Strategy for Ghana, 2002).

One cannot underestimate the role that forests play in the lives of human kind. Sunderlin et al (2005) indicate several ways in which forests help to sustain human lives.

Firstly, without forests, agriculture will be difficult to maintain. Farmlands cannot exist without the forest, which serves as a protecting shield for them. Securing water supplies and soil formation will be impossible to do in the absence of the forest.

Second, forests are a major source of timber, which sustains the timber industry. It is important to note also that around 100,000 jobs are created directly For the country as a whole, the formal timber industry contributes approximately 6% to the Gross Domestic Product (GDP), and 11% to the country's total export earnings (Marfo 2010).

It also creates about 100,000 jobs through direct employment in the legal timber industry and an estimated 130,000 jobs in chainsaw milling (Derkyi 2012).

One of the most important ways in which forest fringe communities can benefit from the forest is through Non-Timber Wood Produce (NTWP).²⁷

²⁷ NWTP and NTFP are used interchangeably.

4.6 FOREST POLICY – THE EVOLUTION

Ghana is endowed with abundant natural resources, which has contributed immensely to its economic development. In 1906, the colonial administration passed legislation to check the rate at which commercial tree species were being felled.

This led to a Forestry Department being established in 1908. Forests were first demarcated and reserved between 1928 and 1939 (Boakye and Baffoe 2007).

The first formal Forestry Policy came into force in 1948. The policy was necessitated by the need to produce timber in commercial quantities, mainly for export (Birikorang et al 2001). The policy however had its fair share of challenges; the major one being that management of land was a sole responsibility of the government, there was poor collaboration on the part of the government with forest fringe communities (Boakye and Baffoe 2007).

The 1994 Forest and Wildlife Policy on the other hand, focused more on the need to promote forest conservation as well as the need for Sustainable Forest Management (SFM) practices to ensure a healthy environment and develop a sustainable forest and wildlife sector in the country. However, Boakye and Baffoe (2007) identify some challenges faced by the policy in trying to reduce poverty. They include problems related to resource tenure, forest ownership, and lack of effective participation from various stakeholders in forest management decision-making (because of insufficient incentive schemes to ensure SFM).

The IIED categorizes the evolution of Ghanas forest policy into four phases (Birikorang et al 2001); “consultative,” “timberisation,” “diktat,” and “collaborative”. A different legislative and policy framework, each having distinct consequences for forest management, marks each period. Below is a table explaining these distinctive periods.

Period ¹	Date	Legislative & Policy Framework	Implications for forest management
'consultative'	1909	Forestry Department established	First attempts to regulate timber trade, impetus to forest reservation
	1927	Native Authority Ordinance	Formalised 'native authority' of paramount chieftaincy and traditional councils
		Forest Ordinance	Vested in central government power to constitute and manage reserves
'timberisation'	1939	Concessions Ordinance	System of timber harvesting rights, and revenues introduced
	1948	Forest Policy	Conservation and management of permanent forest estate, and liquidation of off reserve forest
'dikta'	1951	Local Government Ordinance	Elected local councils introduced; start of decline in formal influence of traditional authorities
	1962	Administration of Lands Act	Vested in central government the management of stool lands (and collection of revenues)
		Concessions Act	Vested in central government the right to grant timber concessions and management of forest resources
	1974	Trees & Timber Decree, Forest Protection Decree	Criminal offence to operate without valid property mark; prohibition of any activity in forest without consent of Forestry Department
	1983	Control of Bush fires Law	Attempts to control bush fires first through criminalizing offenders, and more lately through regulation and organisation of early burns by district assemblies
	1990	Control & Prevention of Bush Fires Law	
	1993	Forestry Commission Act	Established FC
'collaborative'	1994	Forest & Wildlife Policy	Introduction of present policy on forest and wildlife
	1994	Trees & Timber Amendment Act	Biannual renewal of property marks, timber trade regulated through permits and levies (including log exports)
	1995	Interim measures	System for regulating off reserve logging (including farmer right of veto, and compensation for crop damage)
	1996	Mater Plan for Development of Forestry Sector	Outlines strategies, programmes and scheduling for implementation of Forest & Wildlife Policy
	1998	Timber Resource Management Act (& Regulations in 1999)	Introduces timber utilisation rights and Social Responsibility Agreements
1999	Forestry Commission Act	Establishes new integrated Forestry Commission as body corporate	

The second table summarizes the various forest policies Ghana has had up to date and their aims

Table 5.1 Timeline of Ghana's colonial and post-colonial forest policies and legislations (1908-2011)

1908-1948 (40 Years in existence)	1948-1993 (44 years in existence)	1994-2011 (17 years in existence)
Colonial period: Era of Protection	Colonial and post-colonial period: Era of 'Timberisation'	Post-colonial period: Era of pro-poor forest policy and emergence of governance
Objectives of 1908 Forest policy: <i>'Conserving a sufficient area of forest suitably distributed throughout the country in order to protect water supply, prevent erosion and to ensure the maintenance of the present climatic conditions existing in the high forest zone which are essential factors in the cultivation of cocoa, cola and other crops on which the prosperity of the colony largely depends.'</i>	Objectives of 1948 Forest policy: <i>'Management of forest reserves by methods which will achieve maximum production and value on the basis of sustained yield.'</i>	Objectives of 1994 Forest and Wildlife policy: <i>'Manage and enhance a permanent estate of forest and wildlife resources; promote and develop viable and efficient forest-based industries; promote public awareness and involvement of rural people in forest management and conservation; promote research-based and technology-led resource management and Develop institutional capacity at all lv els.'</i>
Legislative instruments		
*Native Authorities Ordinance No. 18 of 1927 (Cap. 111) - Established local government system with power being given to the paramount chief and his traditional council of elders.	*Trees and Timber Ordinance No. 20 of 1949 (Cap. 158) – Responds to the regulatory needs of the fast-growing timber industry.	Timber Resources Management Act, 1997 (Act 547) – Repealed the Concession Act of 1962 (124) and provided for the granting of timber rights in a manner that secures the sustainable management and utilisation of timber resources.
Forest Ordinance 1927 (Cap. 157) – Constitution of forest reserves on (a) state land, (b) stool lands at the request of Native Authority, and (c) private lands at the request of owners.	*Local government ordinance (No. 51) – Repealed Cap. 111.	**LI1649 Timber Resource Management regulation, 1998 – provided guidelines for the allocation and management of timber resources.
*Concessions Ordinance 1939 (Cap 136) – Regulated the granting of commercial timber rights by stool or 'natives' and endorsement by court through certificates of validity.	*Forest Improvement Fund Act, 1960 (Act 12) – Deprived chiefs of their economic power by centralised collection and management of forest revenues.	The Forestry Commission Act 1999 (Act 571) – Repealed Act 453 and re-established the Forestry Commission as a semi-autonomous corporate body. It also brought the forestry sector agencies under the FC.

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Source: Derkyi (2012)

4.7 Stakeholders in the forestry sector

Kotey et al (1998:40) refer to stakeholders as “a number of persons and institutions that have a statutory, customary or moral right to use or benefit from the forest, and the power - legal, traditional or moral - to control or regulate conduct and behaviour which has an effect on the

forest, and others whose acts or omissions impact on the forest or whose livelihood or well-being is affected by the forest”.

In other words, state and non-state establishments, actors, affiliations that shape decision-making bordering on the distribution, conservation, coordination, control and usage of forest resources. Stakeholders in Ghana’s forestry sector include the state and its agencies such as the Ministry of Lands, Forestry and Mines (MLFM), Forestry Commission (FC), forest fringe communities, farmers, stool landowners and the timber industry. Other Indirect stakeholders include NGOs, political parties, journalists, students, civil society groups and the labour movement.²⁸

4.7.1 Central Government

European colonialists in Ghana reserved vast areas of forestland from local populations to central government (Amanor, 1999; Matose 2006). This shift in control empowered governments in particularly developing countries to design legislative tools that will regulate the use and management of forest resources. Variuos ministries, agencies and departments are set up by government to perform this function.

4.7.2 Ministry of Lands and Natural Resources

The Ministry is responsible for making and coordinating all forestry and land policy. Kotey et al (1998) noted that in recent years it has taken on a leading role in the forest policy field and has been the motivating force behind recent policy initiatives. The ministry is responsible for directing and coordinating the activities of all agencies operating under it. These include the Forestry Department, the Game and Wildlife Department, the Forest Products Inspection Bureau, the Administrator of Stool Lands, the Timber Export Development Board as well as donor funding and projects within the sector.

4.7.3 The Forestry Commission (FC)

This body was set up (re-established) under the Forestry Commission Act 1999 (Act 571).²⁹ (Ghana Government website, accessed 20/10/2014). It is a subdivision of the Ministry of

²⁸ Kotey et al (1998).

Lands and Natural Resources (MLNR). This is the statutory body responsible for managing and ensuring forest resources in the country. There are three divisions within the FC: the Forest Services Division (FSD), the Wildlife Division (WD) and the Timber Industry Development Division (TIDD), which is further divided into The Wood Industries Training Centre and the Resource Management Support Centre.

4.7.4 District Assemblies

Since 1988, district assemblies have been the engine on which local governments run (Kotey et al 1998). The Local Government Act³⁰ regulates them. Currently a total of 216 district assemblies are in the country.³¹ They are made up of elected representatives from all towns and villages in each district. Their mandate includes passing of by-laws and creating development programmes, intervening in environmental and forestry issues. Most District assemblies have prevented timber companies from exploiting off-reserve forests as well as keep an eye on trucks and machinery that ply the area. They are also involved in implementing interim measures to control timber exploitation in off-reserve areas (Oppon 2004)

4.7.5 Traditional Councils

The Traditional system or authority of governance is a very important institution in Ghanaian society. A number of customary land owners (stools, clans, families, tindanas and tendamba) make up the council. In the South-western part of the country the “Odikro” (Paramount chief) ³² is the leader of the council. Legislative and customary laws oblige the stool landowners and government the right of management and ownership rights respectively, but consecutive legislation has excluded traditional authorities with little decision making powers regarding forest management in spite of their legal role as owners. Current policy is however trying to rectify this trend (Kotey et al 1998).

³⁰ Act 1993(Article 462)

³¹ <http://www.ghanadistricts.gov.gh/news/?read=46228>. Accessed 17/10/2014.

³² The “Odikro” or Paramount Chief is the political head of a town

4.7.6 Forest dependent /Fringe Communities

As long as history goes, it has been established that the indigenous or pre-colonial African population has always had a hand in managing and preserving of natural resources found in our forests³³.

While acknowledging the roles that central governments have played in the past as forest conservators (mainly through the creation of reserves), there is growing recognition that government agencies have not ultimately proved the most effective agents for preserving forests. Even where forest entities have successfully managed the forests for conservation purposes, they have not always done so in a participatory manner (Kotey *et al.*, 1998). In Ghana, as well as many developing countries, crucial decisions pertaining to the use and management of forests have not always involved local communities. The main interests of colonial forest policies was on timber exploitation and export, as well as to meet the competing land and forest demands of farmers and loggers (Wiggins *et al.*, 2004; Asante, 2005). Thus, despite the major role forests play in their lives, dependent/fringe communities were totally excluded from forest management activities.

Forest-dependent communities were therefore excluded from management activities of the forests despite the significant role forest plays in the livelihood of these communities. Today, government still largely controls forest management in the country, although forest dependent communities are also regarded as stakeholders (Eshun 2008).

State agencies take most important decisions without consulting communities, and discriminate against communities with respect to resource access (FERN 2006).

³³ See Matose & Willy (1996), Fabricius (2004), cited in Alhassan 2010.

5 Theoretical framework

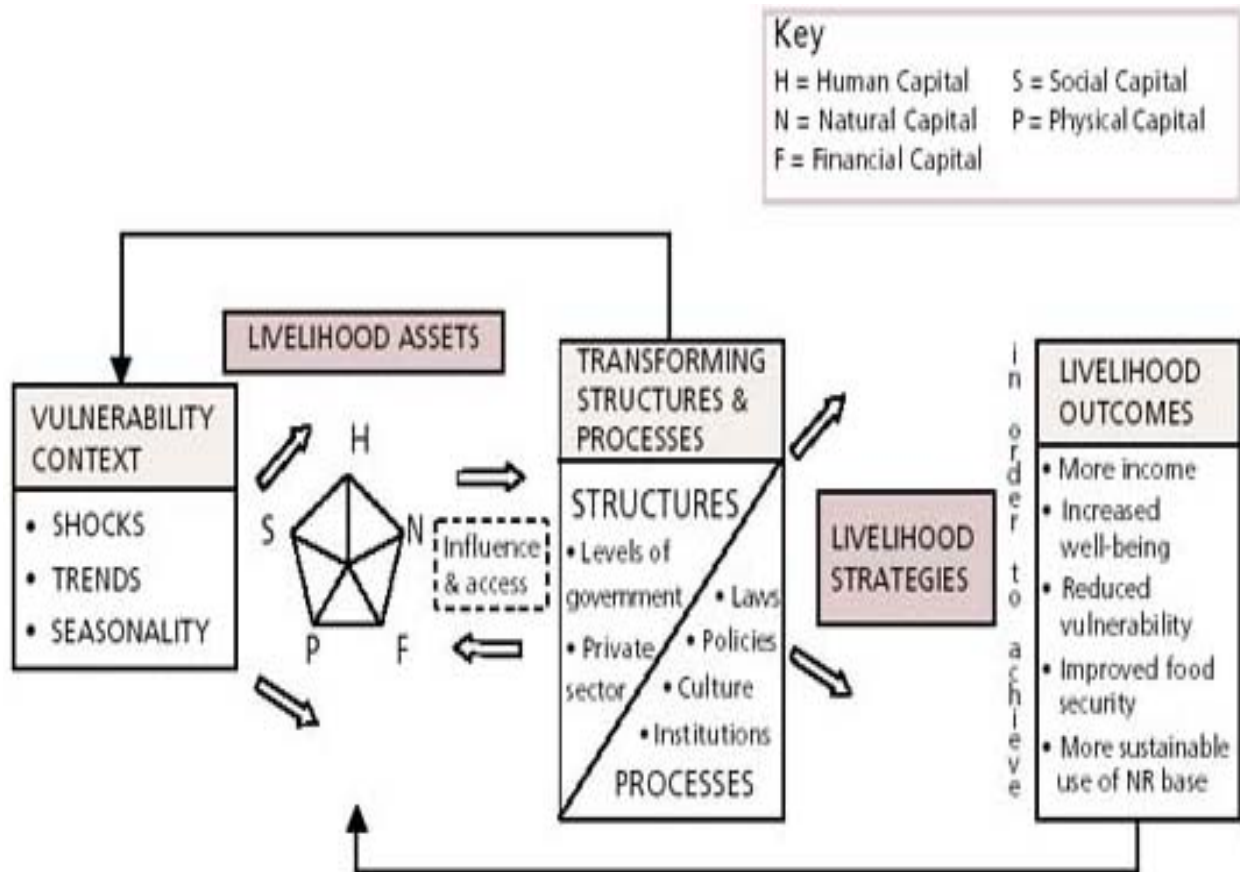
In this chapter, we give an overview of various theories and concepts related to the study. These include the Sustainable Livelihood Framework, the concept of Sustainable Development, the concept of institutions, and the concept of benefit sharing. The livelihood framework will be used to show the relationship between assets owned by rural cocoa farmers, and how the use of those assets will improve or impede their livelihoods. Next, the concept of sustainable development will be used to demonstrate how forest resources can be managed in a sustainable manner, so that future generations can benefit from it. Using the concepts of assets and social relations under the framework, we will analyze the effects of a REDD+ compensation scheme on the livelihoods of local communities in our study area. This will lead to a discussion of how the expectations of local people with regards to REDD+ can be achieved in the face of seasonal vulnerabilities, climate change and the challenge of sustainable forest management (SFM). The concept o

5.1 The Sustainable Livelihood Framework (SLF)

The concept of sustainable rural livelihoods has become important to the debate about how poverty can be reduced, how the environment can be managed, and the issue of rural development. The SLF or simply put the Livelihood framework, is a concept which developed from the broader concept of the livelihood approach, which has its roots in understanding how different farmers in rural communities cope with emergencies such as drought, famine and floods. The framework, which is popular amongst students of development studies and people who work in the area of development policy, organizes and presents the factors that enhance or impede livelihood opportunities, and describes the relationship between these factors. The SLF is both used as an analytical tool and a tool for policy making. In this study, it is used as an analytical tool to describe the nature of preferences for REDD+ compensation in six selected local communities, and how compensation is likely to impact on people's livelihoods. A livelihood is defined as comprising the capabilities, assets (stores, resources, claims and access) and activities needed for a means of living (Chambers and Conway 1992). Ellis (2000) expanded on this definition:

A livelihood comprises the assets (natural, capital, human, physical, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household.

According to Carney (1998), a livelihood is sustainable when it is able to cope with and recover from stresses and shocks, maintain the capabilities and assets, as well as provide sustainable opportunities for the next generation. The assets which poor people possess or have access to, the livelihoods which they aspire to achieve, and the strategies they adopt to achieve them, are all influenced by the context in which they live. This constitutes the three elements under the SLF namely Assets, Vulnerabilities and Transforming processes, institutions and policies. Below is the SLF in a diagram, which shows the relationship between local peoples assets, livelihood strategies available to them, and the institutions which exist to transform their assets into desired outcomes. Before desired outcomes, the vulnerability box shows that farmers are always prone to shocks, changing trends and seasonal changes, which may affect their livelihoods and the extent to which they can achieve desired outcomes.



Source: DFID, FAO (2000)

Figure 8: The Livelihood Framework

5.1.1 5.1.1 Assets

Assets come at the beginning of the Framework, and comprise the resources and livelihood strategies that people have access to and use to make a living. Assets are owned, controlled, claimed or accessed by the household. They are grouped into five types as follows:

Human capital: This is defined as the labour available to a household (Carney 1998). It includes skills, knowledge, good health and physical capability important for the successful pursuit of different livelihood strategies. The value of human capital can be improved through education, engaging in some vocation and skills acquired through work experience. When a person is free from illness and other health challenges, he is most effective at work, whereas a sick person is the least productive.

Natural capital: This is the natural resource base that human beings exploit for their livelihoods and survival. It includes forests, trees, wildlife and water bodies. When human effort is added to natural capital, the value increases.

Social capital: These are the social resources (networks, social claims, social relations, affiliations, associations) upon which people draw when pursuing different livelihood strategies requiring coordinated actions. They also join these networks in order to gain support. Group representatives, social organizations, rules and sanctions, shared values and mutual understanding is some examples of social capital (Serrat 2008).

Physical capital: This usually includes properties and productive assets that are available to people, which helps to improve their livelihoods, farm equipment, health facilities. Examples of these are public infrastructure such as community centres, individual houses owned by households, agricultural inputs such as fertilizers, seedlings and machetes, and school buildings, roads.

Financial capital: Financial capital consists of all sources of income available to a household. Of all the other assets, this is the least attainable and available to poor people. All the other livelihood assets are required in order to acquire this. Some examples of these are credit facilities, loans, and remittances.

5.1.2 Vulnerabilities

The second element in the SLF is the Vulnerability Context. It refers to the capacity or lack thereof, of an individual, household or community to secure their livelihood. The concept is related again to the risks and insecurities among individuals, households or communities in the face new threats. Vulnerabilities are external to the local people; but it has the ability to determine their livelihoods and establish which schemes should be put in place to realize them. The concept has three elements- shocks, seasonalities and critical trends.

Shocks: Include health, natural (flood, drought, and deforestation), economic (loss of markets) and social (conflict) shocks. Shocks can both directly and indirectly influence the amount of assets negatively. Shocks are short-term.

Trends: These are based on population growth trends, natural resource availability, economic and political trends which all can have positive and negative effects on people's livelihood.

Seasonal shifts in prices: The price of cocoa on the world market is volatile and unpredictable. These affect the livelihoods of farmers negatively, as their incomes are reduced.

5.1.3 Transforming structures and processes/ Institutions

The third element of the Sustainable Livelihood Framework is a set of structures and processes. These structures are also referred to as institutions. These include public and private organizations that formulate and implement policies, deliver services, and purchase, trade and perform other functions that impact on people's livelihoods. These institutions may be formal or informal, local, national or international (Serrat 2008).

5.2 The Sustainable livelihoods Approach/Framework: A critique

There is a significant literature on the applications of the SLF in the development discourse. Since the 1990s since the concept came into vogue, various governments, international organization, private actors and local communities have applied it to their development projects. The Framework has been criticized based on a number of factors:

There has been calls for the inclusion of other assets in the Assets pentagon. Hussein (2002:17) argues that the pentagon should distinguish between political, personal and cultural capital. Similarly, Carney (2002:22) has suggested that the issue of gender, should be included in the pentagon, since it underpins all aspects of society. He has emphasized that the SLF has downplayed the gender issue. Also, there has been suggestions to include the issue of cultural capital as an asset. Another criticism leveled against the framework is that of the inclusion of cultural capital as an asset (Hodson 2006).

The SLF has again been criticized for placing power in the hands of the rich to the detriment of poor, rural farmers whom the Framework seeks to protect. This is because most of the funds meant for development programs of the poor find their way into the hands of the more powerful actors in local communities such as chiefs, opinion leaders and local politicians.

5.2.1 Relevance of the SLF to our study

The Livelihood Framework is important both to policy and in analysis in a number of ways. First, it helps in our understanding about the livelihood of poor people, showing us what factors impede or improve the livelihoods.

Incorporating the poor and vulnerable in developing that concerns their lives. In terms of poverty reduction, results from projects implemented with the Framework goes a long way to help other projects which may be upcoming. Thus, development policy makers and researchers can compare and contrast the benefits and challenges of a particular framework. Through the concept of assets in the Livelihood Framework, we are aware of what capitals rural farmers they possess, how they can

In spite of the many criticism labelled against the concept above, In rolling out the compensation to the local communities, the REDD + program may need some prior local knowledge. The SLF is a perfect tool for learning from indigenous knowledge. Without the participation of the people, the compensation program will come to nothing. Through the views of local people, legitimacy and acceptance is acquired,, and these are two vital tools needed, if the compensation program is to succeed.

5.3 The concept of institutions

In this section, we will discuss how the concept of institutions is relevant to our study.

Institutions cover a wide array of constructs; therefore it is difficult to define it in a single way within the social sciences (Vatn 2005). In our study however, we will concern ourselves with specific concepts and terminologies that are relevant to our discussions of REDD+ agenda and compensation. We will look at the types of institutions- formal and informal rules and how this can help to realize the REDD+ agenda of compensation in farming communities. We will again analyze the physical structures through which the objectives of REDD+ would be implemented. The concepts of property rights and resource regimes would aid our understanding of how various actors access natural resources, and the rules governing forest resources under the REDD scheme.

Definition of institutions

According to Berger and Luckmann (1967: 2), “institutionalization occurs whenever there is a reciprocal typification of habitualized actions by types of actors” (in Vatn 2005: 10). This definition is coming from the Classical Institutional economics school of thought. According to this school of thought, people tend to become products of the social conditions under which they grow up the social conditions under which people grow up and live determines their actions and behaviour towards institutions. Individuals are social beings who have the capacity to learn and develop shared concepts as they grow up and live other members of the society. Thus, the social capabilities of people and their worldview are social constructs (Vatn, 2005, p.11). Similar to this understanding is the definition given by Veblen (1919, p.239), defining institutions as “settled habits of thought common to the generality of man”.

In sharp contrast to the definitions given above, are neo classical economy underpinnings. The basic assumption underlying this school of thought is that institutions are external rules that govern the behavior of individuals in a society, thus institutions do not play any role in forming individuals behavior in the society or their view of the world. The definition of institutions given by North (1990: 3) sums this up: “the rules of game in an society or, more formally, the humanly devised constraints that shape human behavior”. According to this perspective, institutions do not only serve as constraints on human behaviour, but they are also the rules that define individual rights in relation to accessing resources and rules which makes transactions more simple and quicker (Vatn 2005: 12). Bromley (1989: 22) also sees institutions as external to the individual (Vatn, 2005: 12). He defines institutions as “the rules and conventions of society that facilitate coordination among people regarding their behaviour”. Still on the definition of institutions, Scott (1995a: 33) combines elements from both the classical economy and neo-classical economy schools of thought when he defines institutions as consisting of “cognitive, normative, and regulative structures and activities which provide stability and meanings to social behaviour...” According to Scott, institutions have their transport channels in the form of cultures, structures and routines (Vatn, 2005: 10). Scott dwells more on the forms that institutions may take - regulative, normative or cognitive rules.

In this study, our use of institutions will be contextualized in Scott’s definition. In general therefore, institutions mean the regulative, cognitive and normative structures that guide human behaviour in a society. Cognitive aspect refers to how people construct meanings and

classify objects in their heads, normative part concerns the values, the right or wrong behaviour, and regulative part concerns external structures that rewards or punishes behaviours that are not in conformity to the rules of the game. In relating this to our study, regulative structures are the physical institutions of REDD, both at local and national levels which regulates the behaviour of actors within the REDD architecture. Through these structures, the REDD agenda can be implemented. In this definition, the cognitive aspect refers to how human beings construct meanings in their heads and classify objects. The normative part concerns values- what is wrong and what is right. The regulative refers to external structures that will reward or punish individuals who do not conform to the rules of the game.

Institutions can be distinguished as formal or informal. Formal institutions are legally introduced laws that are enforced by state institutions, which are embedded in state operations based on laws that are enforced and monitored by the government. These comprise laws, contracts, political systems, organizations and markets (Rauf, 2009). Informal institutions on the other hand do not rely on enforcement methods by the government. They have roots in the local communities and are entrenched in existing customs, traditions rules of conduct and beliefs (Sokile and Van Koppen 2005). The two complement each other. As Saleth and Dinar (2004) note, informal rules are somewhat an extension of local people's translation of formal rules, while formal institutions are derived from and rely on informal institutions for their stability and growth. Informal institutions have internalized rules, which the individual becomes so accustomed to in his day to day life that is it almost invisible. Examples of informal institutions are norms, traditions, customs, value systems, religious and social trends (Rauf, 2009). Formal institutions are written down rules, which have the force of legal backing. In modern economies, Vatn (2005,p.9) states that the state, market and firms are the three most powerful informal institutions.

Formal and informal institutions on REDD+ architecture, regulates relationship between actors in the REDD architecture, and how to achieve sustainable forest management and low carbon emission rates.

5.3.1 Resource regimes , property regimes and property rights

Resource regimes are rules defining access to resources, their transfer and inheritance, and rules about how the products of using resources may be distributed between various

stakeholders (Vatn 2005). Rules governing the access to resources (access rules) are related to the type of property rights and user rights, which is defined by formal or customary law. The second element, which is rules about how the products from the use of a resource is distributed (interaction rules), is related to rules for transfer between actors of the resources or the products produced by using them. Production and consumption processes come with different negative effects (Baumgartner (2000). Therefore, Vatn (2005) encourages the inclusion of negative effects in analysis of resource regime. Ownership to a benefit stream comes in different forms, including the the right to possess, the right to manage, right to income, right to consume and right to transfer, among others (Honore 1961, cited in Vatn, 2005: 254).

Relating this to our study, there is the existence of a resource regime in the forestry sector. According to the Law, economic trees growing on forests belong to the state, while the forests themselves belong to the farmers.

Property regimes

Vatn (2005: 255) defines a property regime as “the structure of and duties characterizing the relationships between individuals with respect to a specific good or benefit stream”. There are four classifications of property regimes. These are private property – where property is owned by an individual; common property – where private property belongs to a group of individuals, state or public property – where the property is owned by the state, and open access – where there is no property, every member of the community is permitted to use a benefit stream without any restrictions. This leads to excessive depletion of the natural resource, and consequently the tragedy of the commons. In addition to formal rights prescribed under a property regime, there are norms and informal institutions that perform supplementary functions under all the property regimes (Vatn, 2005: 256).

Property rights

Is generally, how people, whether as individuals or collectively, hold rights and responsibilities to natural resources. Vatn refers to property rights as a specific type of right, which is fundamental in resource allocation issues (2005: 254). Liebecap (2004) links

property rights to institutions. According to him, property rights are social institutions that define or limit individuals' privileges in relation to resource allocation. According to Vatn (2005), sometimes a third party, usually the state, is elected to preside over some rights. Then, a property right becomes social relation between the rights-holders and the rights-regarders as defined and supported by a specific authority structure. In implementing the REDD+ agenda in the Aowin district, the issue of property rights is vital for all actors, ranging from government institutions, NGOs, REDD officials and local farmers.

The importance of a property right for rural people in the Aowin district is emphasized in the way in which they can access and use forests for their livelihood activities such as planting farm crops, collecting fuel wood, burning charcoal and hunting animals.

5.4 INSTITUTIONAL ARRANGEMENTS FOR REDD+ IN GHANA

The REDD+ process was initiated in Ghana within the context of the 1994 Forest and Wildlife Policy. In 2009, as one of the first African countries to initiate the development of a National Strategy on REDD+, Ghana entered the REDD+ program of Forest Carbon Partnership Facility (FCPF) of the World Bank to take opportunities provided by the Facility to enable her to reduce deforestation and forest degradation. Apart from reducing deforestation and degradation, the country also coordinates negotiations on the development of international mechanisms on REDD+ for the African Group.

In Ghana, the Ministry of Lands and Natural Resources (MLNR) has the overall responsibility for the planning, policy direction and monitoring sector programmes to meet the goals of the country on forestry. The Ministry is headed by a cabinet minister who is appointed by the President. The Forestry Commission (FC) which falls under the MLNR, and is headed by a government appointed Chief Executive, who implements all policies and programmes in the forestry sector, and is the focal point for REDD+ (Orstin, 2013).

The National REDD+ Working Group (NRWG)³⁴: With specific regard to REDD+, the National REDD+ Working Group (NRWG)³⁵ is responsible for the overall management and coordination of REDD+ issues (Orstin 2013). The NRWG is a multi-stakeholder body consisting of representatives from government, private sector and civil society, traditional

³⁴ Sometimes referred to in the literature as National REDD+ Technical working Group (NRTWG), (Orstin 2011)

authorities and development partners. It was established in 2008 as part of the preparatory institutional stages that helped Ghana to submit its Readiness Plan Idea Note (R-PIN) to the Forest Carbon Partnership Facility (FCPF). It is headed by the Deputy Minister of the MLNR. It operates through Sub- Working groups, which consist of experts in the areas of:

- Strategic Environmental and Social Assessment (SESA)
- Policy, Legislation and Governance
- Consultation and Participation
- Monitoring, Reporting and Verification (MRV)
- Reference Emissions Level (REL)/Reference Level (RL)

The Climate Change Unit of the FC serves as the secretariat to the NRWG. Within the NRWG, the interests of the academia and research is represented by the Forestry Research Institute of Ghana, and local communities and forest forums interests is represented by a member of the national Forest Forum. Furthermore, a representative from the Wildlife Division of the Forestry Commission is responsible for the Community Resource Management Areas (CREMAs) (Marfo et al 2013).

National Climate Change Committee (NCCC): In order to ensure effective coordination, the REDD+ focal person at the Forestry Commission sits on the NCCC, which falls under the Ministry of Environment, Science and Technology. This Committee has the responsibility to develop strategies to deal with the current challenges of climate change and also develop a comprehensive National Action Plan to adapt to climate change for sustainable livelihoods (ibid).

Technical Coordinating Committee Plus (TCC+): For a broader coordination of the various initiatives related to climate change and natural resources, there TCC+ is largely responsible for coordinating Ghana's FIP, REDD+ and VPA processes as well as climate change (FCPF, 2011). This Committee is made up of the technical directors of all the relevant ministries together with coordinators of the respective initiatives. It works up to a cabinet-level advisory body, the institution which is supposed to provide guidance and policy direction at the inter-ministerial level. The "+" means that it is elastic and open to new representatives.

The Environment and Natural Resources Advisory Council (ENRAC) is the apex advisory body at the Cabinet level that provides oversight on national climate change issues including REDD+ initiatives. It is chaired by the Vice President (FCPF, 2012). It is an inter-ministerial body with membership drawn from government, labour, business, civil society, and the National House of Chiefs. ENRAC has been highly effective at combating illegal gold mining, as well as taking the issue of land tenure from the grassroots to the national level. This is evidence that ENRAC is functioning body that advises high-level decision-makers on environmental issues (National REDD+ Secretariat and Ghana Forestry Commission May, 2014).

Last but not least, the *Ministries of Agriculture and Mines and Mineral Resources, Environment, Science, Technology and Innovation (MESTI) and the Environmental Protection Agency (EPA)* are important players in forest-related issues, especially those regarding land use, and are involved in the coordination of climate change proposals. At the sub-national level, District Forest Departments and the District Assembly are key institutions in the implementation of REDD+ (CLIMATE FOCUS, 2010). At the community level, Local Forest Forums and the National House of Chiefs have also been identified as playing critical roles (CLIMATE FOCUS, 2010). Consultation forums have also been held nationwide to educate rural people on REDD+.

5.5 Critique: Challenges to REDD+ Arrangements in Ghana

Developing a practical policy for REDD+ in Ghana is a challenge due to the following factors:

- Legal and Institutional gaps- Ghana's legal pluralistic system of tree tenure in which the land can be accessed by farmers and landowners, but naturally occurring trees on them belong to the government, makes it difficult to determine who owns carbon rights and tenure rights. In case of payment of compensation, who must be paid? As the legal structure stands now, carbon stored in trees would like timber, be classified as belonging to the state because it has economic value (Mayers et al 2010). This leaves farmers at a loss.

5.5.1 Relevance of concept to study

In spite of these challenges, it is logical that REDD+ scheme for compensation in Ghana cannot be implemented in a vacuum, there must be institutions which will be the channels of information between the people and government. What is needed are politically neutral, effective and strong institutional basis, and an amendment in current legal documents which grant user rights to the State. In the same manner, traditional norms and conventions that lead to sustainable forest practices, must be encouraged and if possible, codified to make adherence to them easier.

5.6 Benefit sharing

This refers to “a commitment to channel some kind of returns whether monetary or non-monetary, back to the range of designated stakeholders- participants or affected communities” (Ministry of Lands and Natural Resources, Ghana). A proportion of revenue earned by the State is given back to local communities, direct or indirectly. Direct benefit sharing refers to cash payments to individuals or communities, and indirect benefit sharing includes other non-cash benefits, including infrastructure or community facilities, and grass-roots development activities.

Within the context of REDD+, benefit sharing is defined as “the action of ensuring eligible stakeholders involved in REDD+ project implementation receive an equitable portion of the non-financial and/or financial benefits derived from REDD+ project activities”³⁶. Similarly, Luttrell et al (2012) define benefit sharing under a REDD+ scheme as the distribution of net gains from the implementation of REDD+. In order to have a well-functioning benefit-sharing scheme, there must be a trusted and transparent mechanism for the delivery of benefits, as well as for actions and the building of legitimacy and support of a REDD+ intervention (IUCN 2009, P.2; Lindhjem et al., 2010).

³⁶ REDD Desk encyclopedia <http://theredddesk.org/encyclopaedia/benefit-sharing> . Accessed 10.12.2014.

5.6.1 Existing benefit sharing schemes in Ghana's forestry sector

Williams and Davis (2012) and Cotula and Mayers (2009) have asserted that, it is important to undertake an assessment of the successes and challenges of previous benefit sharing frameworks in a previous sector, REDD+ is to function under an effective, equitable system. In Ghana, the forestry sector provides a typical case for reference.

Currently, there are two main benefit-sharing schemes in the forestry sector. These are:

1. Constitutional provisions, which allows for stakeholders to have a share in the fees collected from timber companies, and
2. The Modified Taungya System (MTS) (Sambian 2012; Agyei 2012; Foli and Dumenu 2011; Tropenbos International Ghana 2010; and Lindhjem et al 2010).

With regards to the constitutional provisions, Ghana's constitution (Article 267) provides a fixed calculative method for the sharing of revenue accruing from customary lands. The Forestry Commission of Ghana operationalizes this formula in the share of proceeds from forest resources. Out of the revenue received from timber operations both in on-forest and off-forest reserves, the Commission deducts 60 per cent and 40 per cent of revenue received from timber operations in forest reserves and off forest reserves respectively as management levy (Sambian 2012). The remaining revenue is then distributed among the stakeholders based on the constitutional provision. This is illustrated in the table below.

Table 4: Benefit Sharing Scheme for Timber Revenue in Ghana

Stakeholders	Forest Reserves %	Off- reserve Areas %
Forestry Commission	60.0	40.0
District Assemblies	19.8	29.7
Traditional Council	7.2	10.8
Stools	9.0	13.5
Office of the Administrator of Stool Lands (OASL)	4.0	6.0

Source: Foli And Dumenu (2011)

As depicted above, under the current benefit sharing framework, the Forestry Commission benefits more than the other stakeholders. The framework above uses a mechanism of benefit sharing which does not cater for the needs and interests of the real landowners or farmers. Too much power is given to the FC, which has a lot of discretion to grant concessions to their own people, even without the knowledge and consent of the other stakeholders. The power of the FC in benefit sharing has been a source of concern for rural farmers.

The second framework for sharing benefits accruing from the use of forest resources is through the MTS. This system aims to rehabilitate degraded forest reserves with food and tree crops to improve farmer livelihoods and the environment; and has a system for sharing the stumpage fees generated by the sale of commercial timber species in and outside forest reserves. The MTS is an upgraded form of the old *Taungya System* (TS). The difference between the two is that, the MTS has an incentive aspect, where farmers are paid for the number of trees they grow on their lands³⁷

5.6.2 Relevance of the concept of benefit sharing to REDD+ and for our study

The concept of benefit sharing has been criticized for enriching more powerful groups to the neglect of poor rural farmers. As such, most of these schemes lack the necessary legitimacy from local stakeholders. In Ghana, forest fringe communities benefit from resource use in one way only- through Social Responsibility Agreements (SRAs). Before a timber company operates in a forest, it is required, as part of the Timber Utilization Contracts (TUCs), to draw up a plan for contributing to the community, for example by building schools, clinics and so on (Lindhjem et al 2010). But this practice has been reduced to monetary value, and has lost its relevance to the poor rural people, because the elite (traditional leaders) have captured it (Marfo et al 2012; Tropenbos International Ghana 2010).

³⁷ Key Informant interview with Lawrence Fosu, Chief District Forest Manager, Forest Services Division, (Fieldwork 2012).

In spite of this however, benefit sharing has the advantage of giving to each stakeholder, their deserved worth of the share from the use of a natural resource. This makes them feel a part of the system, and motivates them to use the forest in more sustainable ways. In the Aowin district, the MTS has provided some form of security for poor farmers, who feel that their needs are being addressed. Again, benefit sharing helps to prevent resource-related conflicts.

Benefit sharing is moreover a practicable way to engage community participation in forest governance, something that is critical to the successful implementation of the REDD+ agenda and in the distribution of compensation to farmers. This concept is therefore relevant to the REDD+ compensation scheme in Ghana in the Aowin district in particular. Further, the success of the compensation program greatly depends on an effective benefit sharing system. Motivation to protect and conserve the forests, and engage in more sustainable practices will lead to the sustainability of the REDD+ compensation scheme, reduction in deforestation and degradation, and an overall improvement in the livelihoods of local people.

5.7 Sustainable Development

Another concept, which we found relevant to our study, is Sustainable Development (SD). The Brundtland Commission in its report titled “*Our Common Future*” (1987) was the first to give an authoritative definition to the term. According to the Report, SD is defined as “Development that meets the needs of current generations without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 45). The theoretical framework for sustainable development emerged between 1972 and 1992 through a sequence of international conferences and initiatives on the concept. The first major international forum where major international actors discussed the concept on a global scale, thereby giving it momentum, was the UN Conference on the Human Environment, held in Stockholm in 1972 (John Drexhage and Deborah Murphy, 2010). Development (IISD)The Brundtland Report provided the momentum for the landmark 1992 Rio Summit that laid the foundations for the global institutionalization of sustainable development.

In Development literature, literature, a path is seen s being sustainable if overall welfare does not decline along the path (Pezzey, 1989). From the definitions given above, we can say in general that sustainable development is a pattern of resource use that aims to meet present human needs, and also preserve the environment to meet these needs of the future generation.

According to this theory, humans are required to use natural resources at a rate at which they can be replenished naturally.

There are three independent and mutually reinforcing pillars of sustainable development – economic, social and environmental.

Economic- This is the ability of a system to produce goods and services on a constant basis in spite of constant depletion.

Environmental: Refers to how a system can maintain a secure resource base in the face of constant exploitation and depletion of natural resources such as forests.

Social: A socially sustainable system is one that portrays fairness and equity in terms of distribution of resources, and in terms of accessing these resources.

From the above, the concept of sustainable development is intended to include environment, economy, and social issues; but in the real world, it is often contextualized as an environmental issue (Drexhage, J. and Murphy) This is because in its early years, it was mainly concerned with a green agenda, that is involving environmental issues in economic development.

Chasek (2009: 394) asserts that sustainable development has become an environmental issue because the Commission on Sustainable Development (CSD) has attracted representation largely from environmental bodies, meaning that parties a lot of attention is given the environmental sectors. (Dodds et al. 2002: 5) note that the minimal participation by ministers with portfolios other than environment, further marginalized the debate at the sessions and limit the CSD's impact and follow-up process.

5.7.1 Difficulties in implementing sustainable development

According to Moyo (2009), in spite of the widely accepted nature of the term, sustainable development has actually done very little in terms of programs and policies aimed at improving the lives of the poor. The term is loose, and is prone to different interpretations of government, and organizations. The lack of a specific focus of the term is a challenge.

Further, the intergation of the three pillars has made the concept a comlex one, which is difficult to achieve. However, this study is hinged on this concept because we believe that by ilinking the concept to practical climate issues such as REDD+ compensations which is implemented at the grassroot level, it will give the concept some practicality, and people will come to accept it more.

5.7.2 Relevance to our study /REDD+ Compensation and sustainable development: the linkages

In relating this theory to the study, it is clear that REDD+ compensation will impact greatly on the livelihoods of farmers- in both positive and negative ways. Which aspects of the compensation program are sustainable? How do the three nested and interconnected pillars of sustainable development theory (economic, social and environmental) affect communities?

The sustainable development theory is applied to this study in a number of ways. First, the study draws on the environmental pillar of sustainable development, in terms of managing forests in such a way that they are not depleted beyond their natural capacity, and in a way that future generations can benefit from.

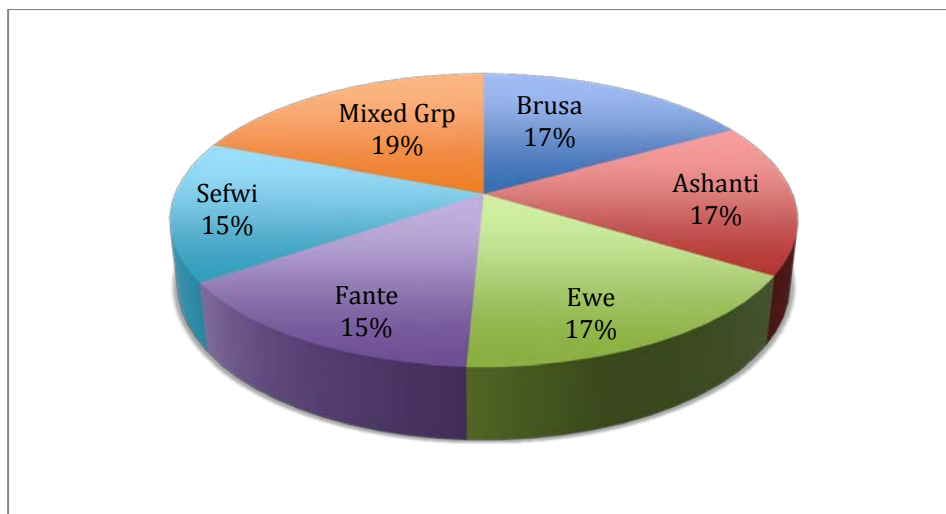
On the issue of compensation, economic and social pillars can be applied. Paying compensations to farmers would impact positively on their livelihoods- positively and negatively. Also, farmers expressed their readiness to engage in alternative livelihoods such as fishing, basket weaving and livestock rearing. In relation to the environment, a sustainable management of forests through good practices will conserve the forests for the use of future generations.

The issue of equity in benefit sharing, as well as in the distribution of compensation monies, are important to discuss under the social pillar.

6 Peoples Preferences for compensation

This chapter explores primarily the findings from the focus group discussions. In all a total of eleven (11) focus group discussions were held in six (6) communities namely Jensuu, New Yaakase, Adonikrom, Sewum, Asantekrom and Boinso. In each community, focus groups involved a different ethnic group, with each divided into men and women, except in Sewum where prevailing circumstances forced researchers to mix both men and women. The ethnic groups that participated are: Sefwi, Ewe, Ashanti, Fante, Brusa and a mix of eight (8) ethnic groups (see Figure 1) from Northern Ghana (Kusasi, Gruma, Dagaaba, Dagaare, Frafra, Busanga, Bimoba and Wangara) It is important to mention here that out of these groups, nine are in-migrant ethnic groups, with only two (Brusa-New Yaakase and Sefwi/Brusa in Jensuu) being indigenous to the area. 6 key informant interviews, as well 10 individual interviews were also conducted.

Figure 9: Ethnic group composition



Source: fieldwork 2012

6.1 Focus Group Participants

One hundred and thirty six (136) people participated in eleven (11) focus group discussions, consisting of seventy-nine (79) males and fifty-seven (57) females. Participants were selected with the aim of engaging people with as wide a variety of characteristics as possible. These features include but are not limited to gender, ethnicity, and on the basis of participants being migrants or indigenous groups (original settlers). Ages ranged from eighteen (18) to about

ninety-two (92). Six ethnic groups were represented in the discussions. There was something about each focus group that made it different from others, but the similarity lied in the fact that even with the relative large numbers in the FGs, almost each and every person contributed to the discussion. This required researchers to spend at least three hours with each group, sometimes having small breaks in between discussions. As is characteristic of focus groups, some individuals tend to speak up on certain subjects more than others. This was mostly the case in groups that had comparatively educated (literate) members, who always attempted to speak on behalf of the entire group. This was forestalled by getting as many consensus views and explanations as possible. Despite this, some people decided not to contribute to discussions. At least two of such people were encountered in each group. In such a case their decisions were duly respected and they were not coerced into answering questions or explaining issues at hand. Sometimes groups agreed to disagree. There were also some instances where heated arguments occurred between people with opposing views. Further clarifications on some subjects were given when needed. But otherwise, it was quite interesting to see the processes by which respondents eventually take a stance on an issue.

Figure 10: Focus Group Discussion



A men's focus group discussion underway in Jensuu. Source: Fieldwork 2012.

6.2 Natural and physical environment

The study communities are located in the Aowin district in the Western Region of Ghana. The study communities are all found in the high forest zone of Ghana. Jensuu is the closest to the District Capital Enchi, with Boinso being the farthest away. Off- reserve forests in the study areas have reduced as a result of logging and the growing use of such lands for the cultivation of cocoa and other tree crops such as oil palm and citrus. Recent upsurge in cocoa prices has led to farmers starting new farms or restoring old ones. Responses from most participants implied that soils in the forest reserves are relatively fertile and suitable for the cultivation of most cash and food crops, such as cocoa, oil palm, citrus, plantain and cocoyam.

6.2 Forest use and mitigation activities

6.2.1 Local Economy

The selected study areas consist of fringe communities made up of predominantly farming populations who are known to depend on the forest for survival.

As much as their livelihoods are largely dependent on cocoa farming, they grow other crops such as yam, oil palm, cocoyam, plantain, and cassava; but on a more subsistence level. Chewing sticks and bathing sponges are also derived from certain trees, as well as cane/raffia. Illegal logging also takes place. This is where they get wood to roof their houses. Farming occurs on permanent agricultural land as well as on cleared land in forest areas. Farmers mostly use local implements such as hand hoes for cultivating land, barely using complicated input such as trucks. Other economic activities include chainsaw operation, hunting, transport business, poultry and livestock production and collection of herbal and medicinal plants for sale. Evolving livelihood opportunities include artisanal careers like masonry, carpentry, dressmaking, baking and pastries and auto repairing. Considering these aspects is important in any study on compensation for mitigation activities.

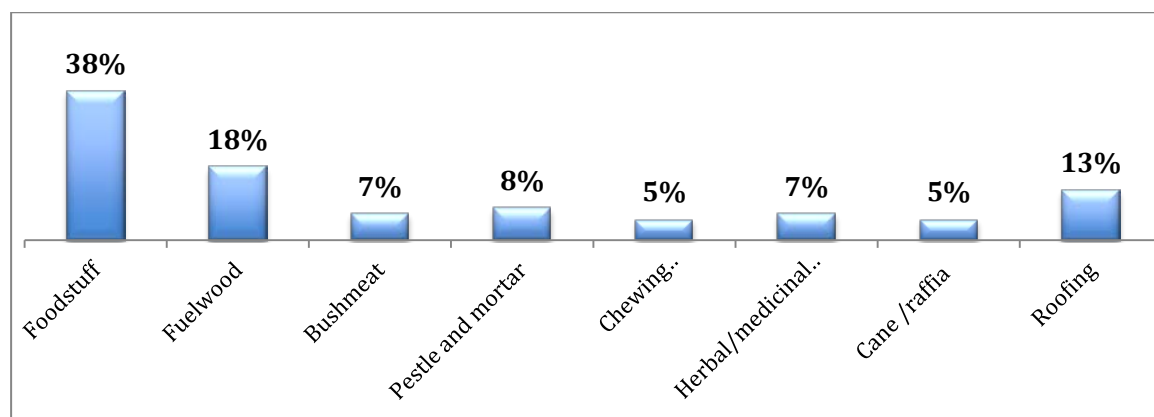
6.2.2 Forest use (excluding cocoa)

During this part of the discussion, groups were initially reluctant to give information due to the fact that one of the facilitators (Forest Guard) was present at the discussion. Questions had to be repeated severally, with the forest guard assuring them he is not there to arrest them before they began to feel at ease. From their responses, it could be deduced that they were fully aware that they were flouting some of the forestry rules. They usually started their explanations by saying “ *We know we are guilty of offence A or B, but you also know that we have to survive*”.

All focus groups agreed that the main usage of the forest is for agricultural purposes (38%), followed by fuelwood collection (18%). Fuelwood collection is used here to include charcoal and firewood. Women are known to be the active collectors of fuelwood. Participants also agreed that they do fell trees sometimes or use cane to roof their buildings. This constitutes 13%; while the use of the ‘wawa’ tree for pestle and mortar makes up 8% of total forest usage. During the men’s FGD at New Yaakase, a man commented, “ *madam, for our pestle and mortar, we do not joke with it. It is used to pound fufu that is the main meal here. We hope the REDD+ project is not going to stop us from making them. We do sell some in Takoradi and other big cities too*”.

Other forest uses include hunting for bushmeat (7%), herbal and medicinal uses (7%), and chewing stick/sponge (5%).

Figure 11: Forest usage in study area (minus use for cocoa)



Source: Fieldwork (2012).

6.2.3 Social characteristics

The major social institutions are summarized in the table below:

Table 5: Local Institutions

Institutions	Communities						
	Jensue	New Yaakase	Sewum	Adonekrom	Asantekrom	Boinso	COMMENT
Traditional Authority	Enchi Paramountancu	Enchi Paramountancu	Enchi Paramountancy	Enchi Paramountancy	Enchi Paramountancy	Enchi Paramountancy	The Paramount Chief is the overall chief of the communities.
Unit Committee	Present	Present					Decentralized system responsible for planning at the local level
Churches, Mosques, Traditional Religion	Present	Present					Seeks spiritual and socio-economic well-being of their members
Community-Based Welfare Groups	Cocoa Grower Assoc; Teak Growers	Farmers Assoc; market Women's Assoc,	Dressmakers Assoc; Hairdressers	Market Women's Assoc; Citrus Grower	Farmers Association. Cane Workers Assoc; Palm	Cocoa Farmers Assoc; Coffee Grower	Provide economic/financial support and social support for their members.

	Assoc. Vegetable Growers Assoc., etc.		Assoc; Taxi Drivers Assoc.	s Assoc, Poultry Farmer s'Assoc ;	Wine tappers Assoc, Poultry farmers Assoc.	s Assoc; Chief farmers Assoc.	
Natural Resource Management Groups	Fire Volunteers, CBAG	Fire Volunteers, CBAG	CBAG, Fire Volunteers	CBAG, Fire Volunteers	CBAG, Fire Volunteers	Fire Volunteers, CBAG	

The institutions form the basis for community development and the management of natural resources. For instance, local chiefs and elders have a lot of influence on the management, use and distribution of lands outside forest reserves and can reprimand offenders of local rules and regulations, thereby ensuring compliance of forest rules. Churches are also known to operate credit unions that can help alleviate members of their financial burdens.

6.3 Compensation for what practices?

Groups were asked to mention what they think causes forest degradation and deforestation. They were then asked to list some relevant mitigation activities that could cause a reduction in deforestation and degradation and which of these they considered worth compensating for, giving reasons. "Mitigation activities" is used here to refer to emission- reduction activities

Groups generally agreed on the causes of forest degradation and deforestation, to be

- ❖ Clearing of land for agricultural purposes: Responses derived from participants indicated that the continuous clearing of parts of forests for cultivating cocoa farms and other food crops is the major cause of deforestation in the area.

- ❖ *Chainsaw logging*: Both the legal and illegal felling of trees for purposes of timber and firewood or burning charcoal, is a major contributor to forest loss in the area. As some of the participants recall, some timber companies which have been given timber concessions to fell a specified number of trees do so without doing what is required of them, that is planting in place a specified number of trees.
- ❖ Also, in order to get prey, hunters are known to use fires to force target animals out of their holes. Bushmeat, particularly that of grasscutters is a delicacy in the area. Most hunters also sell them in order to gain income for the upkeep of their households. This leaves the forest open to hazards like soil erosion and bushfires, as well as driving species from their natural habitats.
- ❖ Wooden pestles and mortars, chewing sticks and sponges, cane wood are all manufactured by felling down the trees needed for those. Also, “herbal doctors” who enter the forest in search of herbal plants disturb the natural growth of trees because they take their barks. Groups also expressed concern about the inadequacy of Forest Guards from the FC to police the boundaries of forest reserves, thereby, giving people the chance to enter forests at will.

There was a consensus from all but two FGs regarding relevant mitigation activities that could cause a reduction in deforestation and degradation. They were mentioned as no hunting, no felling of trees, no usage of the forest for medicinal/herbal purposes, no charcoal burning, no cutting of canes, afforestation, no bush burning, no chain sawing/illegal lumbering and support forest guards by reporting offenders. Chief among the reasons given for why the above mitigation activities should be compensated is that since the forest constitutes their source of livelihoods, so they must definitely be compensated if they will lose part or all of their farmlands. An elderly man in New Yaakase said the following:

“Just as those who live near the sea claim it to be their property, so we also claim the forest as our property. Therefore if anyone plans to take part or all of it, they must adequately compensate us” (Fieldwork 2012).

Other reasons were the loss of income, the chance to earn income by working with forest guards; and for afforestation, farmers given certain number of trees to plant and compensated thereafter³⁸

In spite of these, some of the groups had different views on which of the mitigation activities deserved compensation.

The mixed group of women migrants from northern Ghana did not agree with the others that refraining from bush burning was enough for compensation. Other groups did not see chain-sawing activities as needing compensation. It is quite important to note that none of the groups mentioned stopping of forestland clearance for crop cultivation and fuelwood collection as mitigation activities. This drives home the point that they are heavily dependent on the forest for their survival and source of fuel.

The mixed Ashanti group in Sewum believed that that in addition to compensation for loss of farmland, the fact that REDD will distract their day-to-day farming activities constitute enough grounds for appeasement.

6.4 Compensation Preferences

6.4.1 Compensation formats/types

The subject of compensation was extensively discussed in all groups. Majority of the members in each group preferred to have a combination of both individual and community compensation. This is in accordance with results found three related studies conducted in Brazil (Lima and Marostica 2013), Tanzania (Dyngeland & Waized 2013), and Uganda (Namaalwa & Nabagona 2013). They argued that because individual households will be losing income in the case of REDD implementation, it is only right to compensate them. Also, taking into consideration that the community as a whole lacks basic amenities, it will be appropriate to compensate the entire community. Our study results however deviate from that of Enright (2013) who conducted a study on preferences for REDD+ compensation packages in Vietnam. Results indicated little interest in cash payment as compensation. On the field, it

³⁸ This is very similar to the Modified Taungya System (MTS), which is a practice where land is cleared and initially planted with both food crops and tree seedlings. When the tree seedlings are grown, they are harvested for timber and tree planters receive benefits (Kalame 2009).

was observed that most, if not all of communities' public infrastructure was in a deplorable state. For instance, as at 2012, Adonikrom had still not been connected to the national grid. Residents expressed concern about their security, especially at night since there were no streetlights. They also complained about the bad state of their roads, almost isolating them from the district capital Enchi.

Figure 12: Adonikrom market.



A cross-section of the Adonikrom market. Roads are untarred, leaving the market in a bad state when it rains. FG Participants also raised concerns about their health, given that dust residues and dirt settle on food and have accounted for cholera outbreaks in the area. Source: Fieldwork (2012).

Figure 13: A school building in Boinso.



A section of an uncompleted school building in Boinso. According to resident, the building, started by government some years ago, has been abandoned in this state. Source: Fieldwork (2012).

With regards to an appropriate package for individuals, most groups, especially migrant groups preferred to have individual cash payments to community compensation. They were doubtful if any money would be left for individuals when priority is given to community. The following ensued when the researchers conducted a women's FG at Asantekrom:

Researcher: why do you prefer individual to community compensation?

Woman 1: "Madam (referring to me), there is a saying that goes "each one for himself, God for us all". It will be unwise for me to give priority to community compensation over mine. When I or any member of my family falls sick, will the community take care of us? In as much as I love the community, I love myself and family more."

The implication of the above may be that even after so many years of living in these cocoa growing areas, migrants might still not really have a sense of belonging/may not have completely assimilated. Another thing of interest also was when two FGs stated their preference for only individual compensation and in the form of cash. These groups were the women’s FG consisting of a mixed group of in-migrants from northern Ghana in Boinso; the other was a FG of the ethnic group of Ashanti in Sewum – a mixed group of men and women in-migrants. They seemed not be bothered about whether the community will be adequately compensated or not. For them, had it not been for cocoa cultivation, they would not be living there; hence they will rather have the cash and return to their homeland and venture into other profitable ventures. Another reason given was also that in the event that the community compensation overrides the individual compensation, they would not be present in the communities to benefit from any infrastructure. Most women from in-migrant groups also expressed concern that their views regarding the development of community infrastructure will not be acknowledged.

6.4.2 Preferred in-kind compensation for individuals/households

Individuals/households preferred types of in-kind compensation were discussed in the various FGs (see Box 1). Differences were noted in the type of individual in-kind compensation preferred by men and women. Women were mostly concerned about the elderly and future generations. Also, whereas all groups demanded for housing, in-migrants specifically requested that these houses be built in their hometowns for them. For instance, as immigrants in Adonikrom pointed out, “cocoa is what has brought us all the way here. So if we are no longer going to have land to grow cocoa, it is better we return home”.

Table 6: Compensation Preferences (By consensus)

Focus Group	Cash	Kind	Cash + Kind	Individual	Community	Individual + Community	Remarks
FG 1			Yes			Yes	Men
FG 2							Women

FG 3			Yes			Yes	Women/Mixed group of migrants from northern Ghana
FG 4	Yes			Yes			Mixed Ashanti group(men and women)
FG 5	Yes			Yes			Men
FG 6							Men
FG 7			Yes			Yes	Women
FG 8			Yes			Yes	Men
FG 9			Yes			Yes	Women
FG 10							Men
FG 11			Yes	Yes	Yes		Women

Almost all the groups supported the idea of a scholarship scheme for their children's education. The migrant women's group at Adonikrom raised the question of graduate unemployment. It was suggested therefore that their children after completion of school be put in lucrative employment.

According to the mixed Ashanti group in Sewum, the issue of Social Security (pension) for the elderly ones must not be overlooked. *"The same way that government workers go on retirement at age 60 and beyond, REDD+ implementers should think of doing something like that for our elders"* (middle-aged man, Sewum).

Participants also proposed for the creation of alternative livelihood options, coupled with training opportunities/facilities. As part of their compensation, women's groups asked that they be supplied with Liquefied Petroleum Gas (LPG). To them, collection of fuelwood is a strenuous task; they freely welcomed the prospect of cooking with gas.

Box 1: Preferred in-kind compensation for individuals/households

- ❖ Scholarship for children's education
- ❖ Provide gainful employment to children after their education (women's FG in Adonikrom suggested this)
- ❖ Housing
- ❖ Housing in hometowns (for migrants)
- ❖ Establish social security scheme for older farmers
- ❖ Provide alternative sources of livelihood such as livestock rearing, animal husbandry
- ❖ Assist in building stores/ shops for setting up of businesses
- ❖ Supply LPG for cooking (suggested by women's groups)
- ❖ Provide training in alternative livelihood activities (including livestock rearing, pig rearing, poultry farming, fish farming, welding and fitting, hairdressing, help to open petty trading stores, grocery shops, etc)

Preferred Community compensation

The communities preferred type of compensation was largely in the form of infrastructural development (See Box 2). Their demands for infrastructure building for the community included schools, hospitals, roads, pharmacies and market places for women among others. One women's group suggested a cash payment for the community as well, as she explained that 'everyone in the community, farmers and non-farmers alike, contribute in one way or another to forest protection'. This accords with the Tanzanian study, where majority of participants agreed that compensation be paid to all forest users, irrespective of their burden of loss (Dyngeland and Waized 2013). Some group members countered these views by making the point that those who use the forest illegally should rather be punished so it deters others from doing so.

Another migrant women's group agreed that farmers should receive more compensation than the community, as not all of them will benefit from the community infrastructure. This was taken to mean that as migrants, they will gradually return to their homelands one day and the infrastructure may not directly be useful to them.

'At the back of our minds, we know we are returning home sooner than later, because we are not indigenes. The peculiar problem here is that our land is not ideal for farming, it is best for mining. Oil deposits have been found here and the mining companies have started coming.

We suffer to get our cocoa yields. We will be glad if you take the land and compensate us individually’- (Mixed FGD in Sewum, Fieldwork 2012).

Also, being women and migrants, they will not have so much say in managing community funds. As discussed earlier, the mixed group of Ashanti men and women in Sewum were against the idea of compensating the community, saying ‘it is we the individuals who make up the community. Compensating us means indirectly compensating the community. No need to compensate both’. It is interesting to mention that out of all the groups, the Sewum group were the most vocal, and seemed to know straight away what they wanted and did not want.

Box 2: Preferred community compensation

- ❖ Provision of potable drinking water and toilet facilities
- ❖ Building and maintaining roads
- ❖ Creating sawmills, rubber and palm plantations to serve as employment avenues
- ❖ Employing community members as forest guards
- ❖ Fee-free education for children in REDD affected communities
- ❖ Building more schools, especially secondary schools
- ❖ Hospitals and health posts
- ❖ Give cash to community (one women’s group)
- ❖ Compensate farmers more and community less (women’s group)
- ❖ Building libraries and computer labs for schools
- ❖ Teachers bungalows
- ❖ Street lights (Brusa women’s group)
- ❖ Pharmacies (‘drug stores’)

Who should receive cash payment?

When asked who should receive cash payments, all 11 groups stressed that farmers should be paid cash as compensation. Six groups emphasized that although all forest users including hunters, charcoal burners and others deserve to receive cash too; cocoa farmers should be paid more. Still, two womens groups (one indigenous, one migrant) supported the idea that cocoa farmers be paid more than other forest users who will be directly affected by the loss of

income from forest use. The reason for this as they put it “*cocoa is a more valuable crop. It is because of cocoa that Ghana is on the international market. Those who grow it ought to be treated more special*”.

The indigenous women’s group again agreed that other auxiliary forest users such as workers in the timber and wood industry should be compensated. They were also concerned about the entire village. A consensus decision was taken that all inhabitants of the communities close to the forest should be paid something too. Here, the women’s concern for all members of society was once more established in their discussions.

A mixed group of migrant men also agreed that landowners living in very close proximity to the forests should be compensated, as they are heavily dependent on it for their livelihoods.

6.5 Basis, levels, frequency and flow of compensation

6.5.1 Basis of compensation

This section had the longest discussion times because participants took a long time to deliberate on the issues. The answers given by participants are given in the following table.

Table 7: Basis of Compensation

Basis of compensation	Remarks
Size of farmland	6 groups
Value of cocoa produced	5 groups
Family needs	1 women’s migrant group
Burden of loss	1 mixed group (Ashanti)

Cocoa farmers should get more	General consensus
Should not be less than current earnings	1 women's group (Brusa)
You decide for auxiliary forest workers	1 men's group (Brusa)

While six FGs mentioned that compensation should be made on the size of farmland that each household or individual forgoes, five groups were of the opinion that the value of cocoa yield should form the basis of compensation. They were quick to add however, that implementers should take into consideration the fluctuations in cocoa prices every year in estimating the amount of compensation. The Ashanti group in Sewum indicated that compensation should be based on the burden of loss suffered by each household. Women's concern for both family and wider society was yet clear when a migrant women's group from northern Ghana insinuated that the basis for compensation should be family needs. In their own words, “*compensation can only be considered adequate if it caters for the needs of the family*” (Fieldwork 2012, Sewum).

Of significant concern to the indigenous Brusa women's group in New Yaakase was the likely fall in the overall income and well-being of households. They reiterated “the compensation the REDD+ project will offer us should definitely not be less than what we are earning now, otherwise we will be tempted to go back to using the forest or cocoa farmlands”. This could be seen as a possible warning sign to REDD+ officials that if payments are not made on time, they could withdraw from the programme or refuse to be involved with it.

6.5.2 Levels of compensation

Two levels were suggested; according to farm size and cocoa yield. Payment suggestions ranged from Ghs2000–12,000 per month (US\$872–5200) plus an initial lump sum of Ghs20,000–50,000 (US\$8720–21,000).

In addition a women’s group spoke about the need for housing for everyone. However, there was a general consensus that cocoa farmers should get more compensation than others, and priority be given to them. While eight groups indicated the need for compensation to be based on need, a few of the groups said that farmers and non-farmers should be equally compensated. They however could not decide on the level of compensation for other forest users and left that for REDD+ implementers to decide.

From their answers, one could see that it was difficult for them to isolate the researchers from REDD+ programme proponents. They saw us as working for the government even though we explained to them severally that we are only students writing on REDD+ in Ghana. This could be attributed to the fact that the focus group facilitators were employees of the Forest Services Division of the FC. This did put researchers in an ethical dilemma.

Frequency and flow of compensation

All groups preferred an initial lump sum payment, which would be followed by monthly payments, explaining that they get their cocoa money every month so they are used to that. The women in the groups wanted an additional monthly payment of Ghs 500 for buying LPG. Other suggestions and opinions are expressed in the table below (Table 3). Concerning the flow of compensation, some groups wanted the compensation scheme to run for as long as REDD+ exists in the area. For the loss of farmlands, the migrant women’s wanted compensation for themselves, their children and their grandchildren’s generations. This one was an emotional –filled discussion, where participants kept repeating that cocoa is basically their “life”. Their fears and suspicions regarding their future and that of future generations showed in the way they were discussing these issues. This was especially so in the women’s groups.

Table 8: Frequency and flow of compensation

Frequency and flow of compensation	Remarks
Monthly for 50 years (lifetime of cocoa tree)	

Monthly for 50 years, additional Ghs 500 per month for LPG	Women
One-time payment plus monthly until pension (60 years and above)	
After compensation employ us on our own land for conservation work and pay Ghs 2000 per month	
For loss of cocoa land, compensate our generation, our children's and grandchildren's generation.	"Cocoa is basically our life"
As long as REDD+ project exists.	
Prefer continuous payment	
Next of kin to benefit in case of death	

Fieldwork 2012

6.6 6.7 Institutional arrangements for managing compensation

Individual and communities preferred institutions for managing and distribution compensation were discussed in all focus groups.

6.6.1 6.7.1 Individual compensation

Payment of cash through banks was the preferred mode of payment. There was a unanimous decision on this from all groups. Everyone agreed that the safest means was to pay any money due any farmer through his or her individual bank accounts. They were strongly opposed to the idea of transferring money through the village authorities (traditional or state authorities). Embezzlement and corruption was the reason given for this decision. A couple of them mentioned some cases of bitter experiences with village leadership regarding this. Their responses also revealed that most of them have had experiences with small-scale savings and

loans schemes known as “susu” (popular in rural Ghana). Also, most cocoa farmers were already familiar with the banking system, as COCOBOD³⁹ pays them through banks. This finding is in stark contrast to the Vietnamese case. In his study, Enright (2013) found that participants had full trust in state agencies and state-owned enterprises or banks to handle their and payments in a timely manner; which may be due to the fact that current economic benefit-sharing schemes associated with livelihoods is implemented by the government. The Ghana case on the other hand suggests that people have a strong mistrust in the government.

6.6.2 Community compensation

Participants agreed that a committee involving traditional leaders, literate and informed community members (such as school teachers, Imams and pastors), and farmer representatives should be tasked with managing community compensation as well as development projects.

Both men and women’s groups emphasized the need to include an equal number of men and women on the committee. All groups agreed that the management and distribution of funds should be a transparent and democratic one and insisted that the literate and educated community members are part of the committees so it works well. Box 3 below illustrates the preferences:

6.7 Livelihood and sustainable development impacts of REDD+ activities on local communities

Based on the livelihoods framework, this section seeks to discuss the assets of the local people in the Aowin district, what shocks the farmers are prone to, and the transforming processes and institutions that will translate their assets their demands into meaningful livelihoods. This discussion is a practical presentation of the SLF and sustainable development concepts in our fieldwork will take us to a discussion the sustainable development impact of REDD activities in the Aowin district.

³⁹ Ghana Cocoa Board (COCOBOD) is the government agency that is responsible for the purchase of cocoa from local farmers. It then markets and exports it.

6.7.1 Assets

The assets of the people can be grouped into the following:

Human capital in terms of this, the Aowin district is not is not a highly literate one. More than half of the respondents had only been to basic school, but this does not limit their understandings on some matters.

Human capital in the district include are in the form of teachers, farmers and carpenters and fishermen.

Natural capital: There is the availability of land to both the indigenous farmers and migrant farmers on an equal basis. Ownership of land is open to all who have the purchasing power. In the light of Ghana's legal pluralistic land tenure, it is important to mention here that ownership means access rights, and not user rights, to the farmers. The farmers plant crops on the land and harvest them, but trees grown on the land belong to the state. However, when it most migrant workers (labourers), they worked for the settlers and get paid daily wages. Apart from owning their own farms where they grow crops, farmers also collect non-timber forest products from the forest example cane, firewood, charcoal and bush meat.

Social capital: People in the communities lived close to each other, hence they form strong bonds and ties. The existence of social clubs and groupings also ensure a high level of trust. There are Cocoa Farmer's Associations, with representatives or leaders who are the voice of the people, in their relations with the central government, private timber companies and Non-Governmental Organizations (NGOs). During the fieldwork, it was evident that social and family ties played an important role in securing a job. Apart from this, there are formal and informal rules that strictly guide the use and access to the reserved forest areas. Relating to informal rules, for example, it is forbidden for tribes that are located in the forest zones of Ghana to hunt or farm Thursdays. It is a taboo for hunter to kill a pregnant animal, a young animal or an animal fending for its young ones. Anyone who violates this rule, it is believed, would be struck to death by *Asaase yaa*, the earth goddess. This norm is strictly adhered to. Also, no one is allowed to farm or hunt at all in forests marked as sacred groves. It is believed that the gods reside in the thick forests, and so cutting trees will mean destroying their shelter, or source of food. It is only the *okomfo* (Chief Priest) who is allowed access to these forests for medicinal herbs or to offer sacrifices to the gods. Apart from the spiritual significance that this traditional practice holds for the people, it is also environmentally sustainable, as the forest cover and vegetation is protected, and that results in the sustainable conservation of

biodiversity. Furthermore, the existence of religious associations creates the atmosphere for people to live in peaceful co-existence with each other. Trust is remarkably high within members of the same religious group, for example between Christian groups or two Muslim groups, because they share the same beliefs. In terms of ethnicity, it was observed that there is tension between the Ewe tribe and Asante tribe.⁴⁰ On the political scene, these two tribes are sharply divided; with most Ewes belonging to the ruling National Democratic Congress (NDC) and majority of people from the Ashanti tribe leaning more towards the largest opposition party, the New Patriotic Party (NPP). For instance, in Adonikrom, community development projects have somewhat come to a halt, because the Chief belongs to the NPP, while the Assembly Man is NDC. These two people are stakeholders in development, yet it is difficult for them to come together under one umbrella to plan and implement development programs for the community (Fieldwork 2012). In all the communities visited, there are Community Biodiversity Advisory Groups (CBAGs). These are local people who are employed by the Forestry Commission to protect and guard the boundaries of forests.

Finally, the introduction of *Watchdog Committees* has helped to build trust and strengthen security in the communities. Watchdog committees are made up of a section of the youth in a community who look out for any strange characters or security threats in their neighborhoods, and report them to the security agencies.

Financial capital: Apart from huge cocoa farms, most of the farmers own small plots of land that they cultivate crops on to earn income for their households. Some of the farms are also cultivated on subsistence basis to feed the family. Crops cultivated include cassava, plantain, yam, cocoyam and oil palm trees. Most immigrant labourers earn very little, not enough to take care of their families living with them on the farms or back in their home regions. It was generally the case that most immigrant farmers complained about income. Again, although this is usually not a regular source of income, some farmers have relatives from abroad who remit them from time to time. Others also have relatives living in the big cities like Accra, Kumasi and Takoradi who remit them. Another source of income is loans from banks and credit unions at lower interest rates. The general complain is that, most banks give loans based on collaterals, something that the majority of poor farmers do not have. Micro credit facilities grant loans to farmers. It was realized among the women groups, especially that they

⁴⁰ There has always been tension between these two groups for tribal and political reasons

engaged in a local savings method, called *susu*⁴¹. Micro savings and loan companies who grant financial assistance to farmers in order to help them buy new equipment and fertilizers also help to improve their livelihoods.

6.7.2 Vulnerabilities, existing and potential REDD+ vulnerabilities

The livelihood of the workers could be negatively affected by threats like fire, plant diseases or illegal activities. Loss of harvest due to drought can produce food shortages and result in lower earnings. Most plantation workers have not experienced any shocks that could harm their harvest. Most respondents mentioned fire as the most common threat, but they were quick to add that they hardly experienced it. This implies that the farmers have good fire protection; that is they always clear the weeds on farms. Only three respondents mentioned that illegal activities (illegal tree felling or crop harvesting) to have affected his/her livelihood negatively.

6.7.3 Seasonal changes

In all the communities, the change in the price of cocoa prices on the world market have a negative effect on the livelihoods of farmers, as they get less money for the same amount of cocoa produced, or for even more cocoa produced. This can also be described as a shock to them, because the price changes on the world market is unpredictable. It is an old shock because according to respondents, this happens on an annual basis. Cocoa trees and other could be affected by diseases such as swollen shoot, of cocoa trees, swollen shoot disease, affects a large area of cocoa, and has a negative impact on their livelihoods. Harvest is reduced. Also, the death of family a family member or close relative.

Shocks (short term)- in relation to REDD+

The introduction of REDD+ Compensation measures in itself can be described as a shock to the local people. Before REDD, there had been measures aimed at curbing deforestation and

⁴¹ *Susu* is a form of saving usually common among rural women in Ghana, where group members arrange for collection and payment of savings and rotate on a month-to-month basis.

forest degradation. However, none of these have looked at the element of compensation for avoided deforestation and for undertaking mitigation activities. From FGDs conducted, the impression is that the communities' fear of losing their livelihoods is great, but even greater is their worry over losing their forests over symbolic or cultural reasons. These communities have been living close to forests for decades, and it will be a shock to lose their status as forest people, with the introduction of REDD+ compensation, which is likely to either refuse them access to the forests or place restrictions on their usage. Posed with the question of alternative livelihood strategies in case of loss of forests, one respondent narrated:

“There are other livelihood activities available, but none comes naturally to us. We are forest people, and that is our unique identity. When you travel to Northern Ghana, they are known to be great hunters, if you go to the Volta and Greater Accra regions, they are great fishermen. When you come to the West, we are foresters. That is our identity. Take it away from us, and we lose ourselves. “

The implication from the above is that the people have a spiritual relationship with the land. They treat it as a human being, they keep the forests tidy and green, and they in turn get medicinal herbs and food from there. REDD+ compensation and its related issues is therefore constitutes a shock to them.

6.7.4 Trends (long term)

This is related to the changes in the price of land associated with the introduction of REDD+. According to the focus groups, there is a scramble for lands now, because the more trees one plants on the farm land or forest, the more money one receives under the Taungya system. Although this is helping to curb deforestation and reduce degradation, it has made land very costly for farmers and other members of the community. With the introduction of REDD+ compensations, this is even going to pose a larger threat.

6.7.5 Transforming processes and institutions

At the district level, the Forest Services Division of the Forestry Commission is responsible for the implementation of all forestry- related policies in the communities, and all REDD related policies and projects. From observations on the field, the relationship between the

local farmers and forestry guards is a cordial one, albeit with some level of strictness. According to the people, the guards are very effective at what they do, as they will not hesitate to punish any one who uses the forest indiscriminately.

Livelihood strategies are being adopted in the face of changing rainfall patterns, changing temperature, and changes in cropping pattern. A large number of respondents were of the view that they would like to engage in other livelihood activities in case of the loss of their forestlands. Alternative livelihoods mentioned include animal rearing, basket weaving, petty trading, hairdressing, carpentry, fish farming, and cane making. These constitute local adaptation strategies to climate change and change in land use patterns.

In conclusion, REDD+ and its compensation scheme will impact positively as well as negatively on the livelihoods and sustainable development of local people. Notwithstanding the challenges mentioned above, appropriate forest management practices such as tree planting will lead to a sustainable forest for future generations. Payment of compensation will increase the incomes of households and individuals.

6.8 CAVEATS/ LIMITATIONS /CHALLENGES FACED

6.8.1 Timing of research

The major challenge we faced was the time of the year when the study was carried out. The study took place between August and September 2012, which coincided with their major cocoa-harvesting season in the country. There are two main seasons when cocoa is harvested throughout the country, the main season runs from September to March, while the mid-crop season is from May- August. In most (if not all) of the communities, participants advised that in future studies, we come at a time when they are not so busy with the harvesting of cocoa on their farms. Although focus group discussions were conducted successfully, we feel that we could have asked more probing questions and hence derived more sincere and frank responses from FG participants had we chosen a different time. It is therefore recommended for future researchers to conduct studies ideally in April or during the mid-crop harvest season. In this way farmers will be more relaxed and more cooperative with the researcher.

6.8.2 Focus Group sizes

The size of FGs was quite challenging, given that the FG guide was also extensive (...pages). The group sizes ranged from eight to fifteen. Since each FGD took between two to three hours, we observed that some respondents in some of the groups were getting easily agitated and bored and eventually the numbers kept reducing.

Some felt that the questions were being too repetitive and were surprised at this, with some even refusing to elaborate more on issues. Researchers recount an individual interview with a Cold Store Owner at Enchi, where the respondent after two or three questions suddenly became angry and asked us to leave. This happened even after he had agreed a day before to be interviewed. Reminiscing on this incident, we think it might have been due to the fact that the man was at work, where people were coming into the store to buy meat at the same time the interview was underway. The lesson learnt here is that even when a researcher or facilitator has pre-arranged a meeting, it is important to remind the potential interviewee two or three hours ahead of the interview.

6.8.3 Payment for participating

Payment for participation in the FGDs was one of the main issues we had to deal with. This is also reported as the major challenge faced by Dyngeland and Waized (2013) in the REDD+ compensation study in Tanzania. Facilitators arranged with some opinion leaders in the respective communities to have groups ready before our arrival. However, most opinion leaders resorted to writing down participants' names, indirectly giving them the impression that they were going to be given "tokens of appreciation" for participating. This gave them a high expectation for monetary incentives. For instance in Sewum, participants practically refused to participate in the discussion until given "sitting allowances". A woman remarked "*madam at least give us something for sitting here for all this long, you know you are distracting our farming activities*". Upon explaining to them that we were only students conducting research, they then demanded for 'soft drinks'. However, unlike the Tanzanian case,⁴² they were not given any cash payment or in-kind 'tokens'. Indeed it was a difficult task convincing them to finally participate and assuring them that depending on their responses, the REDD project could or not begin in their area. This could be attributed to the fact that previous researchers in the area had paid them for participation. In the course of the discussion, participants kept going in and out of the room to attend to personal business.

⁴² See Dyngeland and Waized (2013).

Researchers can agree that it was the lack of monetary incentive more than boredom that kept participants gradually dropping out of the programme.

For future researchers, it is recommended that a provision be made for some sort of ‘participation payment’ when drawing up the project budget. This is likely to keep participants motivated to stay longer and give honest opinions on issues.

6.8.4 Explaining concepts in local language

Another challenge that confronted us was the task of explaining the concept of ‘sustainable development’ in a way that they will understand. Dyngeland and Waized (2013) as well as challenges encountered similar problems in their Tanzanian and Vietnamese cases respectively.

It was difficult to capture the word exactly as it is in their local parlance. Having explored several ways of asking the original questions which read: i) “What does sustainable development mean to the people? ii) In terms of measures to reduce deforestation and forest degradation?” we came up instead with the questions i) “What are some of the ways in which you think your future and that of your children’s generation can be assured? In terms of measures to reduce forest degradation?” we still did not think we succeeded in finding the best ways by which we could elicit answers on these questions. In the future it is therefore important for REDD+ policy makers to use as simple language and terminologies that can be easily translated into the local parlance.

7 LOCAL PERCEPTIONS ON REDD+ AND SUSTAINABILITY, EQUITY AND FAIRNESS AND EFFECTIVENESS OF LOCAL INSTITUTIONS

This chapter contains findings in relation to perceptions of local people on forestry management, and perceptions on REDD+ and compensation distribution. This chapter will look at results and findings from the field in relation to local peoples perceptions of sustainability and REDD. Also, we will look at EDD+, forestry management and their views on the distributional and equity aspect of compensations in the Aowin district of Ghana.

7.1 7.1 Perceptions on sustainability and sustainable forest practices

Among all the issues discussed in the focus groups, this section was the most difficult both for researchers to explain, and for participants to grasp and give independent responses on. Across all the villages, there was no knowledge on the term.

With the help of Facilitators, researchers explained the term sustainability to the groups by using it in a sentence, and giving examples of sustainable forest practices. Resulting from this,

In general, the idea of sustainability was therefore mostly tied to forestry and agriculture. The following are some specific definitions given by four focus groups:

- *“Positive development that has no end”- Male FGD, Asantekrom*
- *“ Using forest resources prudently in a way that the future generation can benefit from it”- Men FGD, Adonikrom*
- *“Forest that is managed in a way which will benefit all people, increase their income and provide a permanent source of livelihood to households and families”- Jensuu Men FGD*

According to the women focus group in Asantekrom, sustainability is explained with a scenario thus:

“Sustainable development can be understood from this scenario: As a trader, if I make progress in my trade business and make profits after selling my goods, and do not incur any costs, then I am doing well and my livelihood is

sustained. On the other hand, if I incur costs, then my livelihood is in danger”
(Fieldwork 2012).

This perception of sustainability by the women in Asantekrom presents interesting findings. While men think along the line of forestry when they are explaining sustainability, women tend to think more of sustainability in terms of economic and social development. What can be inferred from this, therefore, is that there is gendered thinking in terms of what sustainable development means.

From the above, four (three male, one female) out of eleven focus groups were able to explain the term sustainability. Some examples of sustainable forest practices were given across the groups as follows: not cutting trees indiscriminately, planting more trees, storing more carbon in the forests, not burning the forests for bush meat, protection of biodiversity and the ecosystem protection.

The difficulty experienced in explaining the term sustainability to respondents and in them grasping the concept is similarly captured in the works of Dyngeland and Waized (2013) in their Study of compensations formats on REDD+ in Tanzania.⁴³

7.2 Perceptions on REDD+

In all the communities, there was no knowledge of REDD+ and its compensation scheme. After explaining to them what REDD+ meant and its objective, respondents gained an understanding of the concept. From their understandings, the idea behind REDD+ was similar to other mitigation measures that the government and some NGOs had implemented or were in the process of implementing in the communities.

The consensus response was that, as a climate mitigation activity, REDD+ is a climate mitigation activity whose main aim is to ensure the conservation of forests and protect the ecosystem (Fieldwork 2012). Based on this knowledge, respondents were also asked what they perceived as the objective of REDD in their communities. The main objective of REDD+

⁴³ Refer to Dyngeland, C. and Waized, B. 2013. *Views and preferences for compensation under REDD+ in Tanzania: Kilosa pilot project case study*. IIED, London.

from all the groups, was that it is a sustainable mitigation activity that will in the long run help to protect and conserve community forests.

Related to the above, respondents were asked if they thought REDD+ could succeed, if so, why; and the main weaknesses of REDD+. Majority (9 groups) answered that REDD was likely to succeed based on the following factors:

- By instituting a code of conduct that will spell out the roles of communities and REDD+ officials to avoid any conflicts
- By holding regular periodic and follow up meetings with farmers
- By ensuring proper storage of carbon, in order to avoid leakage and additionality problems
- REDD+ officials and institutions must not engage in politics
- Ensuring free flow of information between communities, government agencies and REDD+ officials
- Existence of transparent institutions to manage compensation
- Existence of conflict resolution systems to manage grievances

On the other hand, 2 groups out of the 11 focus groups answered that based on the following reasons; REDD+ was not likely to succeed:

- The existence of a complex land tenure and ownership system
- Lack of efficient governance institutions at the local level
- Bad experience with past afforestation and tree planting programs
- Political interference by the central government

The analysis above shows in spite of the weaknesses, there is a high level of enthusiasm among farmers for the REDD+ compensation program to kick off. Another related issue had to do with the perceived advantages and disadvantages of REDD+. Both men and women, as well as in-migrant and local farmers, mentioned that REDD+ compensation will lead to an increase in their incomes, which will positively affect their livelihoods. Also, focus groups were of the view that REDD+ compensation would lead to community development.

Responses on disadvantages associated with REDD+ were similar among all the groups. First, compensation could promote conflict in the household, between wife and husband over who should keep the money. There could also be issues of corruption, if decision makers or managers of the fund are not selected wisely. According to men FG in New Yaakase, there could emerge from REDD+ conflicts between settler and in-migrant farmers, between farmers and traditional authorities (decision making bodies), and between government agencies and local farmers.

Furthermore, respondents were asked when they wanted the compensation program to start. There was a unanimous view among all the groups, including key informants and individual interviews that they wanted it immediately. Female groups were particularly more excited about the opportunities that REDD+ compensation program would afford them, in terms of alternative livelihood strategies.

7.3 Perceptions on equity and fairness

In general, participants understood equity in the REDD context to mean “each person getting what is due him without any complaints”. From the FGD, this is further understood to mean distributing compensation to individual farmers based on the size of their lands and yield of cocoa per annum. This was the overarching view expressed by all the groups. One reason for this consensus view is that respondents have had a bad experience with the forestry sector where benefits accrued from forest resources are allocated to all stakeholders except the farmer. According to a middle aged woman in the FG in Asantekrom:

“We have learnt our lesson from governance of the forestry sector. We farmers now want to be part of the benefit sharing system, so we propose to REDD officials to put in place a fair and equitable distribution and benefit sharing system, even before the program takes off in our district” (Fieldwork 2012).

The mixed group of men and women in Sewum as well as the men’s group in Boinso expressed the view that in essence, all forest communities must qualify to receive compensation from REDD+. Their contention is that people living in forest communities are

caretakers of the forest; they share a responsibility to conserve it. Therefore, whether a person is involved directly or indirectly in forest activities must not affect level of compensation he receives.

- Other issues raised under equity and fairness were:
- All communities are faced with the same challenge- deforestation and forest degradation. Therefore compensation must be paid on an equal basis. No discrimination based on ethnic groups, gender, migrants and landowners.
- Same method for calculating benefits to farmers
- Proximity advantage- Farmers who live closest to forests must receive a higher compensation than those who live far from forests
- More compensation to farmers who store the most carbon on their farms
- Implement community social infrastructure through CSR

7.4 Effectiveness of local institutions

The question was posed to participants 'do you feel that your local institutions are effective'? 10 of the focus groups (except the women group in Jensuu) replied that local institutions were ineffective, and that there was little information flow within the communities. During the discussions in Adonikrom, the women group (on consensus agreement) added that information dissemination from traditional and district authorities to the local people have sharply declined, especially on monetary matters (Fieldwork, 2012). In contrast to this, the women focus group in Jensuu expressed satisfaction with local institutions. They emphasized, however, that information on local political trends is provided through radios, therefore they are most of the time abreast with local political issues, when it came to issues on about deforestation and forestry management, the information system was weak.

In summary, farmers are the main beneficiaries of REDD+ compensation. In spite of this, results from the field showed that farmers are the least informed and knowledgeable on REDD+.

8 CONCLUDING REMARKS

This study was conducted in a REDD+ pilot area with the aim of obtaining information about local peoples compensation preferences for mitigation activities. It was clear that forest-related activities form the backbone of the communities' economies. People in the study areas are primarily cocoa farmers, whose survival largely depends on the income made from cocoa. Communities are also heavily dependent on the forest for other agricultural activities (growing food crops such as plantain, cassava, cocoyam and cereals), fuelwood, charcoal, hunting and other forest produce such as raw cane for basket making and ropes. There are also secondary or auxiliary users of the forest such as carpenters and timber companies. The introduction of REDD+ would result in drastic changes in the lives and livelihoods of these communities, as people depend differently on the forest and use it in distinct ways.

It is therefore crucial to involve the communities in any discussions regarding compensation packages. The FGDs on which the study is based examined the preferences of communities based on certain criteria, which include gender, ethnicity and whether respondents were indigenous or in-migrants. Major differences were found. Indigenous ethnic groups preferred a combination of individual and community compensation, while the in-migrants were in favour of individual cash compensation. In-migrants were apprehensive about their future due to the fact that the land mostly belongs to indigenous landowners. In the case that REDD+ is implemented, it will have huge consequences for their future, especially regarding their access to and use of land and their livelihoods.

With regards to gender differences, women advocated for the inclusion of all community members as well as future generations in the REDD+ programme. This stresses the importance of including future generations in any REDD+ - related compensation programme.

The community's preferences for compensation were highly diverse, context specific and duly. This must be duly considered in planning compensation packages. Uncertainties and conflicts are basically inevitable, particularly where communities are heterogeneous. REDD+ programmes must take this into consideration and also acknowledge the complexity of the issue of compensation and the moral and ethical dimensions of REDD+ at both the policy and empirical levels of implementation. REDD+ policies and actions will affect a large number of people, mainly within the area of global political economy of climate change.

It is important for REDD+ policy makers to take note of existing land and tree tenure in a country, as well as laws and regulations governing the forestry sector. Since Ghana has a peculiar practice of legal pluralism where both enacted legislation and customary laws govern the administration of all lands in the country, there is bound to be a conflict of interest at one point or the other. As discussed elsewhere in this study, farmers do not owe trees that grow naturally on their farms. It belongs to landholding communities. There is a huge debate surrounding this, with landholding communities arguing that since by law they are the owners of the trees, they should be compensated for its carbon stocks; the farmers on the other hand farmers are claiming that even though they do not grow these trees, they contribute to their growth so if the REDD+ programme is giving incentives for capturing of carbon they deserve it. For REDD+ to work in the country, it is suggested that REDD+, in conjunction with the relevant stakeholders come to a compromise on this, since and policies, since trading of carbon stocks is at the very heart of the REDD+.

Land tenure can also decide the suitability of people to receive benefits. Policy makers are thereby recommended to get a rich understanding of land tenure at the local as well as national levels in designing appropriate compensation packages.

Regarding the institutional arrangements for managing compensations, individuals preferred payments through their individual bank accounts so as to avoid corruption and embezzlement. Communities on the other hand prefer a committee made up of traditional leaders, literate people and farmer representatives to manage and develop community projects.

Local people had no idea of REDD+, although four FGs (3 men, one women) had some understanding of the term sustainability. FG mentioned some of the issues that could be associated with the implementation of REDD+ as an increase in the overall income situation of households, continuous development projects, etc. but were also quick to add among other things that that if information does not flow freely among the stakeholders, payment is delayed and trust is not established between all involved, the project could be heading for doom.

Majority of the FGs understood equity to mean people getting what is due them without complaining. Information flow between local people and local institutions was weak, judging by responses received.

It is important to mention that this study was a small one carried out within a limited amount of time. It is thus recommended that, for future research, a larger and more detailed study involving more forest-dependent regions and communities be conducted.

Despite this, the study has been able to explore the intricacies of people involved in making choices for compensations. The FGDs indicated that local people had no prior knowledge of the REDD+ project, not to talk of their area having been selected for the pilot project. This leaves us concerned that answers were given in the FGDs without a complete knowledge and understanding of REDD+ programme and its effects. This shows the importance of the Free, Prior and Informed Consent (FPIC) process in choosing REDD+ pilot areas as well as in scaling up. From our experience in the field, we would suggest a thorough education of local people on REDD+ projects in the future, so that responses given would reflect the practicalities, and to avoid any biases.

In contrast to the lack of knowledge on REDD+ issues mentioned above, a majority of people showed deep understanding and knowledge about sustainability of forests, as they engaged in sustainable practices themselves.

Most of the respondents also expressed that the agricultural sector had become monotonous, and they would like to engage in different livelihood strategies such as fish farming and livestock rearing.

Another challenge which the REDD+ program may be coupled with, especially with regards to compensation, will be instituting a fair benefit sharing scheme. The current one in the agricultural sector does not pay anything to farmers from the use of forests. Therefore, in order for REDD+ to work effectively, there is the need to look at creating efficient and transparent benefit sharing system.

In view of all the challenges likely to be faced by REDD+ in Aowin, majority of respondents showed interest and excitement over its implementation in their district, as it would lead to an increase in income levels and alternative livelihoods.

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APPENDIX

KEY QUESTIONS/ INTERVIEW GUIDE FOR FOCUS GROUP DISCUSSIONS AND KEY INFORMANT INTERVIEWS (PAYMENT FORMATS FOR REDD)

(AOWIN DISTRICT, ENCHI AREA, WESTERN REGION, GHANA)

Focus on life stories and history interviews, from time to time how has livelihood changed? (generation to generation)

1. PERSONAL INFORMATION

- A) How old are you?
- B) Are you married or single?
- C) How many people constitute your household?
- D) What is your present occupation?
- E) How are you able to provide for your family from your present income?
- F) Do you have any other source of income?

2. HISTORICAL BACKGROUND

- A) Have you been involved in any occupation before this one?
- B) What did you do then?
- C) What was your parents' or grandparents' occupation? Did you inherit the land you are cultivating on now?
- d) How did your parents' occupation influence your present occupation?

3. COMPENSATION FOR WHAT PRACTICES?

- ❖ In your view, **what** practices do you think should be compensated for? (Examples- encourage people to come out with own suggestions: loss of farmlands as a result of protecting forests or change of land use practices eg switching from crop to tree plantation? Other?)
- What would you consider to be relevant mitigation activities (list all possible mitigation activities (examples afforestation, burning the forest in order to hunt for animals, exploring the forest for herbal plants, burning charcoal etc.)

- ❖ Which of the mitigation activities listed above would you consider suitable to be compensated for?

- ❖ What are your reasons for choosing these activities over others?

- ❖ What would you regard as appropriate compensation and why? (Very important, spend lots of time on this)

- ❖ How would you prioritize the compensation packages- example in the form of community infrastructure, services, or agriculture?) – in order of preference.

- ❖ Should the whole community be compensated or only those involved in forest related activities? Please give a reason for your answer?

- ❖ Should compensation be made to only those directly involved in forest-related activities or those involved in auxiliary activities like timber factory workers? Please give reasons.

COMPENSATION FORMATS

(group into men and women, different ethnic groups, migrant (settler farmers, migrant labourers, etc) and let them list all compensation formats and why they prefer A over B)

- How would you prefer compensation to be offered? In cash or in kind? In developmental infrastructure or in monetary terms? Or a combination? Should individual households or community as a whole be compensated? What are your reasons for preferring this particular means of compensation?

CASH IN KIND CASH AND IN-KIND

Community cc cik ccik

Individual lc iik icik

Community AND cic ciik cicik

Individual

- Should compensation be given directly to the individual forest users or community? Why?

- What would you consider to be an appropriate volume/level/amount of compensation? (for example, how much in Ghana cedis per household on average, why? Income foregone from the forest due to not doing agriculture, cutting timber, fuelwood, loss of employment in forestry activities by each household? Total for whole community and then divide by number of households? Should number of household members etc. be taken into consideration? Ask for reasons for their answers).

- How would the compensation affect your livelihood opportunities? (Discuss longer) What impact (physical, economical, social) would compensation have on the lives of local people?

COMPENSATION LEVELS

(Write in detail the explanations given by people, ask critical questions, try to provoke them a bit without being impolite)

- For a particular activity, what is the appropriate level of compensation?

- How much in cedis should they be given?

- Why do you consider this appropriate?

COMPENSATION FREQUENCY

- At what frequency would you prefer compensation to be given? One-time or continuous? Per year? Per season of crop? Give reasons for your choice.

- If continuous at what frequency, and for how long?

- What should be the total time period in giving compensation? Example for families who forego agriculture, what time period should they be given compensation? For the whole period that they avoided farming, or only for some period? Why?

- Do you prefer alternative livelihood activities (activities other than forest-related ones and agriculture)? Why?
(list the activities they would like to engage in, ask for reasons for preferring these activities).

- What would you use these compensations for? (To pay your child's school fees, or start up other businesses, petty trade, rent land from others outside the project area for farming (which crops?), charcoal making, etc, buy firewood, charcoal, start projects on medicinal plants, other income generating activities etc.)

- For women, if you lose firewood, from the forest, what is the alternative? Do you now walk long distances to fetch firewood in another forest? Etc.. How long do you walk? If you stop collecting firewood from this forest, where will you go? How far will you have to walk? How much more time will you need? How will it affect your overall workload?

- If compensation involves alternative income-generating activities, when should the community take responsibility for these? (to get a sense of sustainability of projects).

- What level of compensation do you suggest? Should all forest users be paid based on the same level? How Should REDD categorize forest users in order to compensate them? (for eg those who are more dependent on forests, those who live closer to the forests, settler and migrant farmers, migrant labourers who work on cocoa farms and timber industry, etc)

Ask for reasons for their categorization.

4. DISTRIBUTION, PERCEPTIONS OF EQUITY AND FAIRNESS

- How should the compensation be distributed? And on what criteria should it be made?

- Who should be involved in the decision making process? (men, women, why?)

- Who would you suggest should manage the distribution of compensation and why?

- What do you understand by equity and fairness, in the REDD context?

- What are the benefits of compensation?

- How should the distribution of compensation be decided, and on what criteria? (if alternative employment, who should be involved?)

- Should compensation be based on community effort or individual effort to protect the forest? Why?

- What do you think is better: that compensation is differentiated according to effort (in terms of engaging in particular management practices or output- area protected/carbon stored?) or burden of loss i.e. that people will suffer different opportunity costs depending on the extent of the use of forest? Why?

- Between men and women, who would suffer most from the loss of access to the forest and why?

 - What about younger generation? Will REDD affect them differently than the older generation ? in what ways and why?

 - In your view, between men and women, who would you suggest should receive a higher compensation and why would you prefer (your answer)?

 - Do you think compensation should be given based on proximity to the forest? In that case who gets more: those living closest to the forest (direct forest users) or those living farther away from the forest (city/town dwellers)? What is your reason for choosing a particular group over the other?

 - What kind of issues do you think could be associated with the compensation programme and why? Possible options could include:
-

The overall 'income situation in the village/community will be better', 'will result in corruption', 'unequal payments', 'payments will go to landowners', 'less conflicts', 'increase privatisation of land', and 'other, please specify'

Do you foresee any problems with the compensation programme and why do you think these are potential problems?

Do you foresee any benefits associated with the programme? What are those, and why do you think these could benefit you as an individual?

Has any organization or government provided compensation to you before to conserve the forest or to reduce emissions, or any other activity e.g. mining? How has the compensation (cash, kind or both) helped you as an individual, your household or the community as a whole? How has it not helped you? What would you recommend?

5. PERCEPTIONS OF LOCAL PEOPLE REGARDING REDD AND SUSTAINABILITY

- Have you heard about REDD and what activities they engage in? From which sources? (Government authorities, forestry commission, forest officers, INGOs, (name), local NGO ,(name), media (radio, newspapers, TV), Chiefs, neighbours, other sources.

- Have you attended any training workshops/meetings on REDD? Do you know of anyone who has attended workshops/training programmes?

- When did you come to know that your forest area is selected for REDD project? How did you know? Who informed you?

- Was there any discussion with you or anyone before the forest was selected for the project?

- What do you think REDD's objectives are regarding your community?

- Looking at the current situation, how do you think REDD is on its way to achieving their goals? Why?

- What does sustainable development mean to the people?
 - i) In terms of forest resource management
 - ii) In terms of measures to reduce deforestation and forest degradation?

- Do you think REDD can achieve this? If not what do you think is the best way forward?

- Is compensation important? Why? List your reasons.

- How do you think compensation can be sustained?

- How will the introduction of REDD compensation package change your lifestyle? Do you think your lifestyles will change for the better or worse? Why?
- What alternative employment would you like to be engaged in in the event that you cannot use the forest anymore and why?

- How will the compensation affect different groups, generations, communities, etc. (gender and generational differences).

- How will REDD contribute to eco system development and biodiversity and forest conservation?

- Ask questions on other aspects of sustainability too, example biodiversity, economic and social sustainability aspects, etc. (More schools, good for future generation, healthcare too. HR development etc,).

- How effective are local institutions here; do you feel well informed on issues concerning the whole community and you as an individual? How well informed are you on issues?
- Would you prefer to be compensated for total loss of access to land, or partial loss of access to land; give a reason for your answer.

6. FOREST AND RESOURCE USE, LAND OWNERSHIP, USE AND BENEFIT SHARING

- Who has the right to own land here?
- Do migrants have equal access to the use of the forest as original dwellers?
- Who sells lands?
- Do women have equal rights to own land as men?
- How is ownership acquired; by inheritance or through purchase?

- Is there a particular procedure that migrants have to go through to acquire land or be able to use the forest?

- Do you think forest users should still be given access to a part of the forest to use, if so why? Will this increase peoples' incentives to protect the forest?

- Who manages forestland and how? What are the management activities? (fire protection measures, checking for poachers, encroachers, planting trees, etc)

- How is any benefit accrued to the land/forest distributed? (Between migrants and landowners)?

- Apart from forest, how are major properties acquired, owned and distributed?

- How are land titles acquired?

- In the case that this area is demarcated and cannot be used anymore by you, do you have access to other forests nearby that you can use for your forest-based activities? How far or close is the forest?

- Do you think you will stop using forestland for agriculture if given compensation for your loss of income? Please give a reason for your answer.

ADDITIONAL QUESTIONS

- What is your view on the REDD compensation project?

- Do you think the REDD compensation programme has got a future in this community?

Please give a reason for your answer.

- To what level is the compensation going to influence the young, old and future generation?

- Based on what you know about the REDD programme, how different would you say this is from other compensation packages offered by government or other companies (if any), or NGOs?

- How has the livelihood activities of this community changed from time to time?

- Do you foresee any particular economic activity (ies) that would be viable in the event of the forestland being taken over by REDD? What activities are those, and please give reasons for your answer.

- How have the issues of land ownership, land titles and benefits sharing been managed in the past?
- How have original settlers and migrants co-existed from the past till now?
- Any major confrontations? (with regards to forest land use and/or land ownership or any other?
-
- Do you think REDD is going to change this situation in any way? If so, in what ways and why?



Norwegian University
of Life Sciences

Postboks 5003
NO-1432 Ås, Norway
+47 67 23 00 00
www.nmbu.no