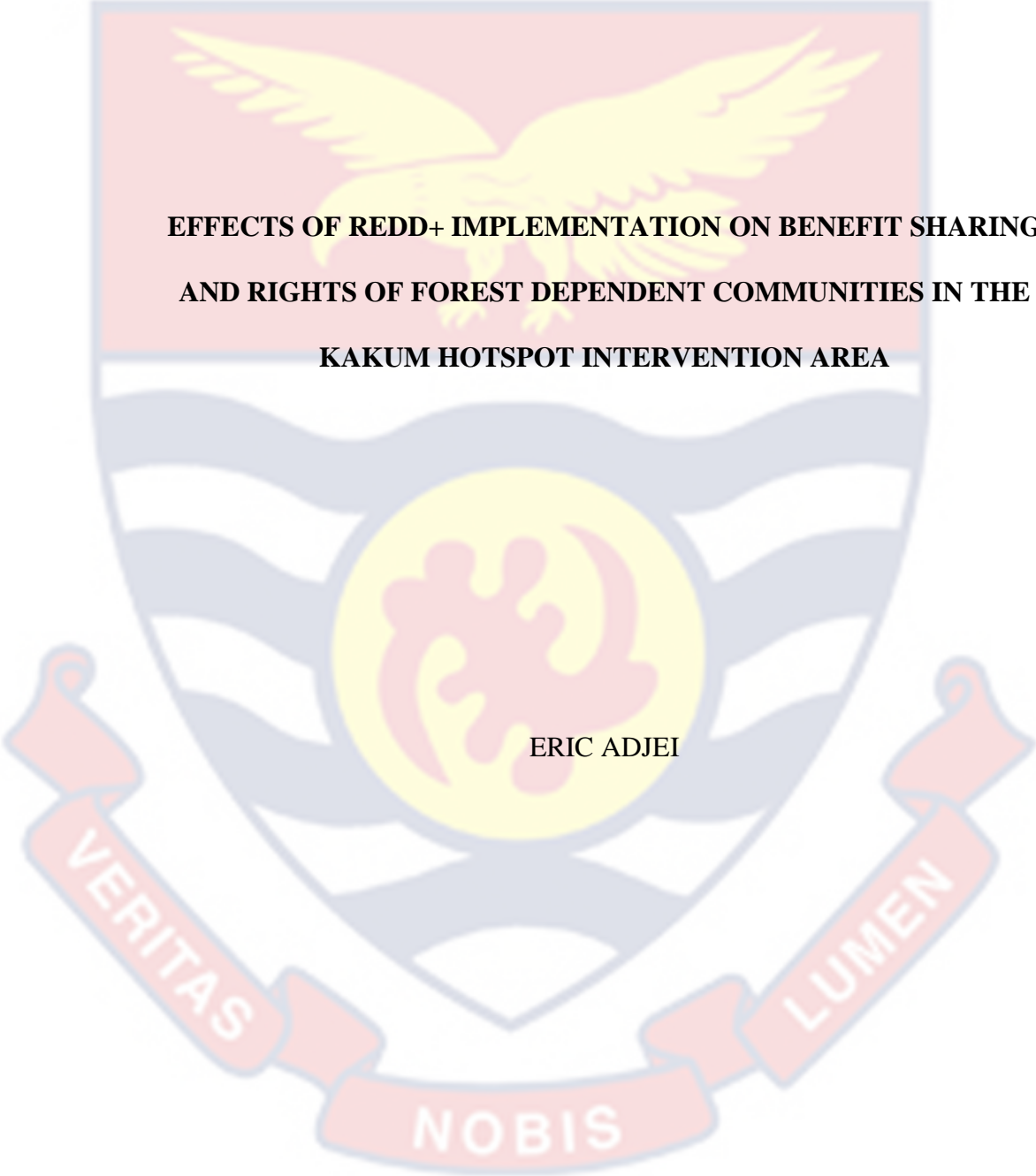


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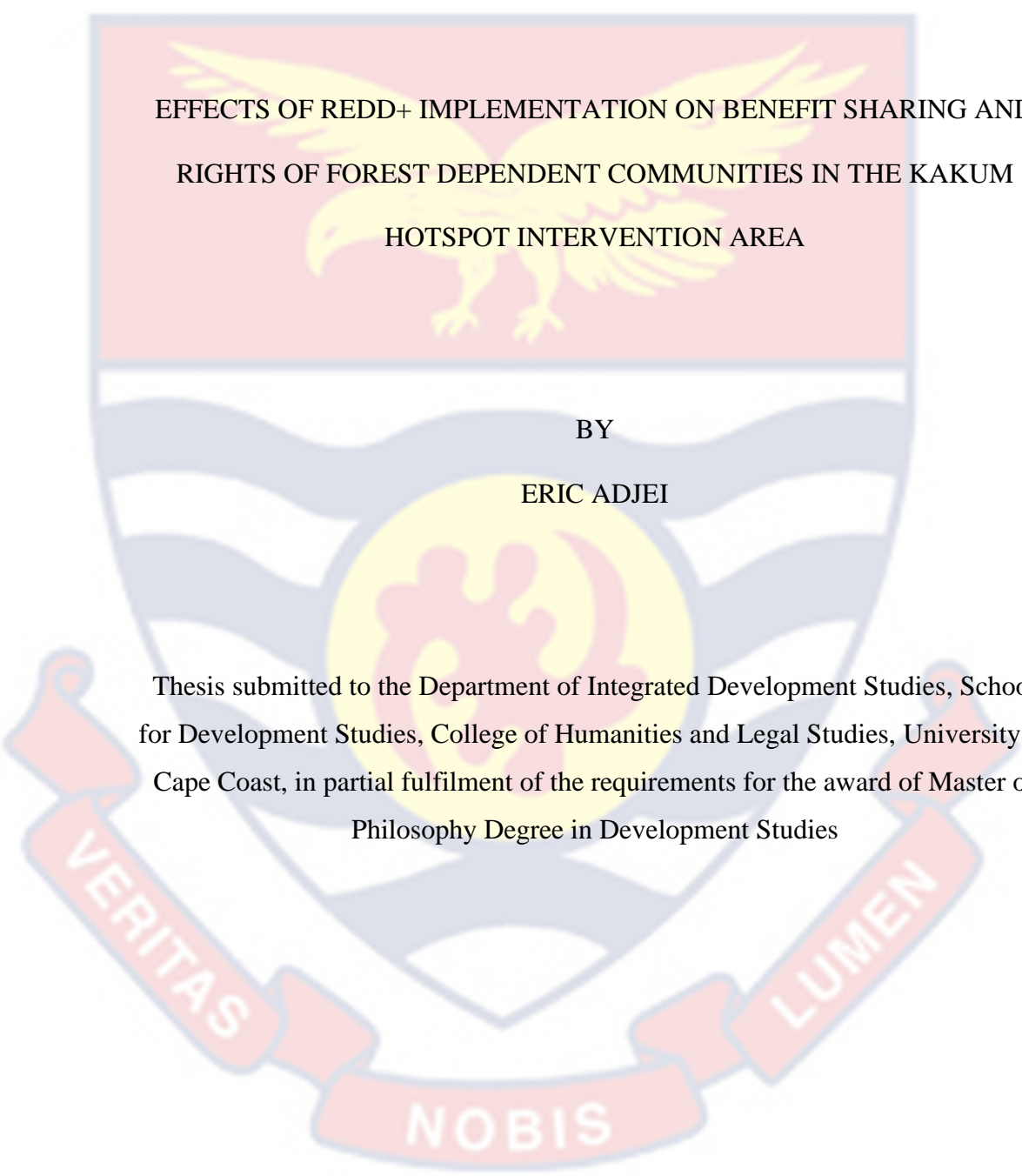


**EFFECTS OF REDD+ IMPLEMENTATION ON BENEFIT SHARING
AND RIGHTS OF FOREST DEPENDENT COMMUNITIES IN THE
KAKUM HOTSPOT INTERVENTION AREA**

ERIC ADJEI

2022

UNIVERSITY OF CAPE COAST



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HOTSPOT INTERVENTION AREA

BY

ERIC ADJEI

Thesis submitted to the Department of Integrated Development Studies, School
for Development Studies, College of Humanities and Legal Studies, University of
Cape Coast, in partial fulfilment of the requirements for the award of Master of
Philosophy Degree in Development Studies

DECEMBER 2022

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature..... Date.....

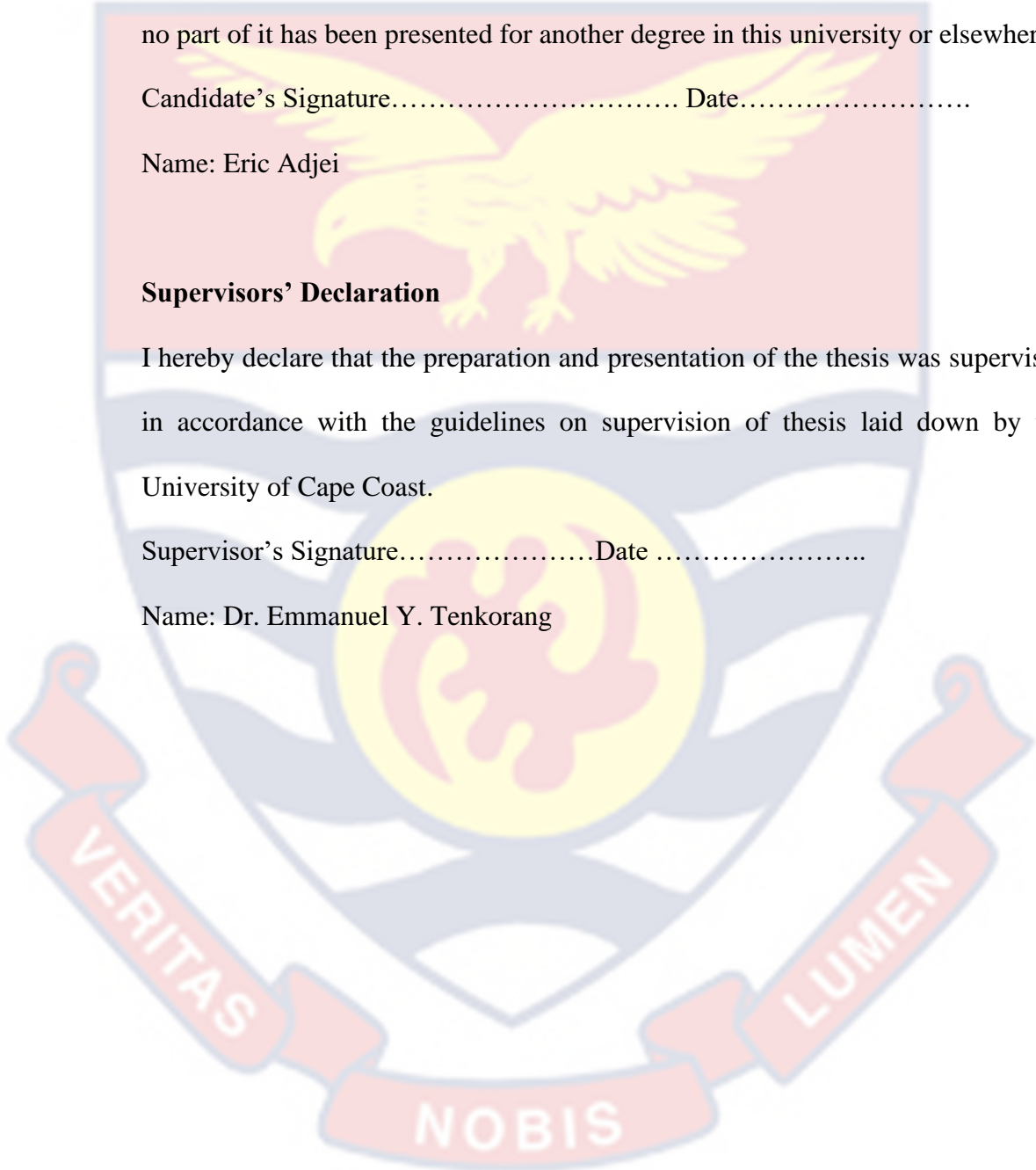
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Supervisors' Declaration

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Supervisor's Signature.....Date

Name: Dr. Emmanuel Y. Tenkorang



ABSTRACT

The pluralistic nature of Ghana's land and tree tenure poses challenges to the implementation of REDD+ and benefit sharing. The purpose of the study was to investigate the implementation of REDD+ in the Kakum Hotspot Intervention Area (HIA) with focus on benefit sharing and effect on rights of forest dependent communities. Specifically, the study sought to review existing benefit sharing arrangements in the Ghana's forest sector, identify the factors that affect the equitable flow of benefit sharing, the effect of REDD+ on rights of local communities and investigate the state of benefits sharing in the HIA. Qualitative research approach was employed using an exploratory design for the study. Purposive sampling technique was used to select a total of 74 participants. The study revealed that Ghana's forest sector benefit sharing arrangements are inclusive but allocates most of benefits to government organisations. The factors that affect equitable benefit sharing includes limited resources, corruption, difficulty in reaching communities and enforcement of laws. The study also revealed that the implementation of REDD+ has negatively affected the rights of forest dependent communities by limiting their rights to access, own or use forests and forest products. Finally, it was also revealed that current benefit sharing arrangements in the HIA do not address the Equity, Effectiveness and Efficiency (3Es) of benefit sharing principles. Based on the findings, recommendations were made to the Government and the Forestry Commission (FC) to review arrangements and policies to ensure benefit sharing are more equitable and also protect forest dependent communities.

KEYWORDS

Benefit Sharing

REDD+ Implementation

Forest Dependent Communities

Forest Management

Sustainable Development

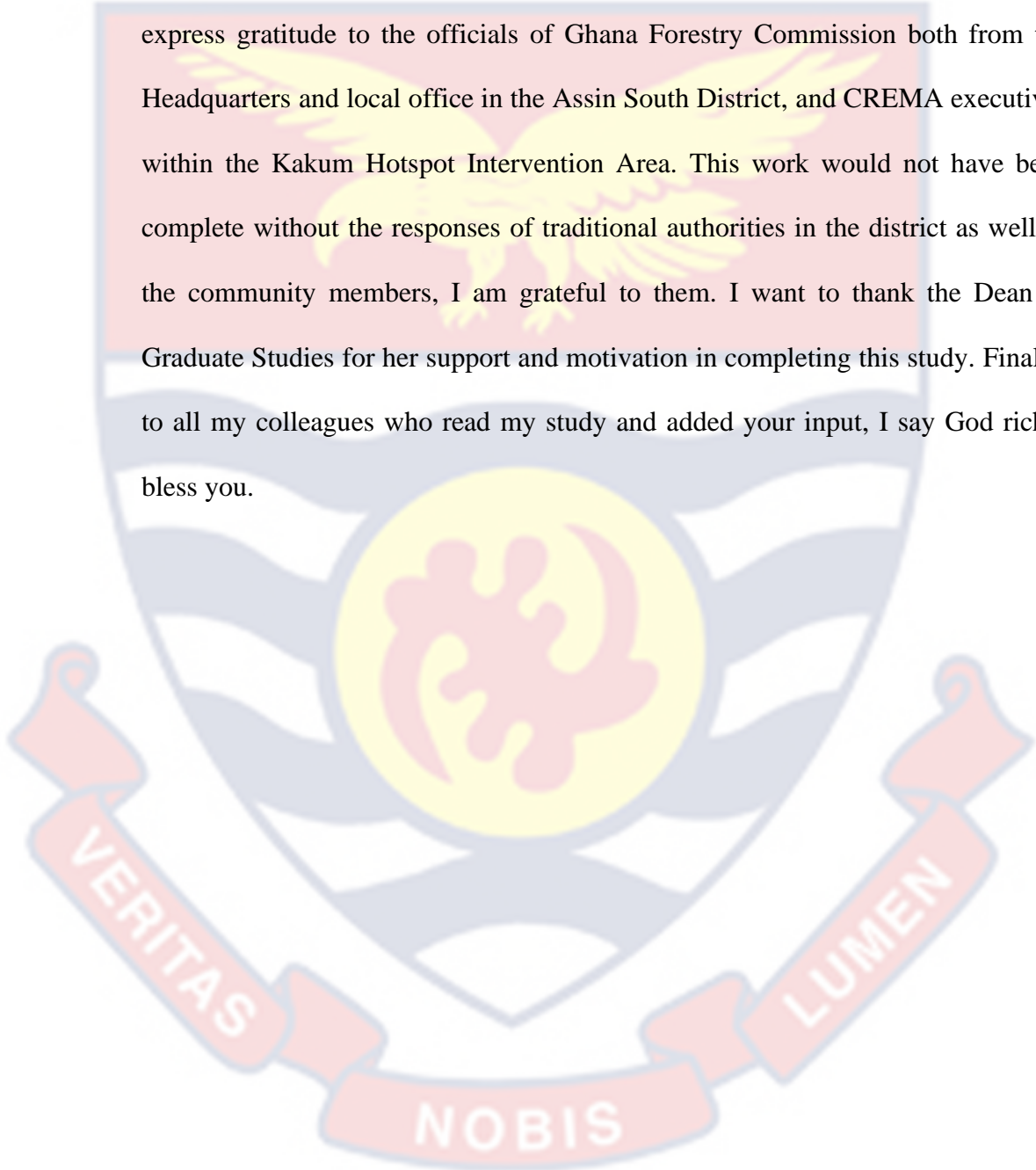
Land and Tree Tenure

Rights



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DEDICATION

To my mother, Rebecca Boahemaa



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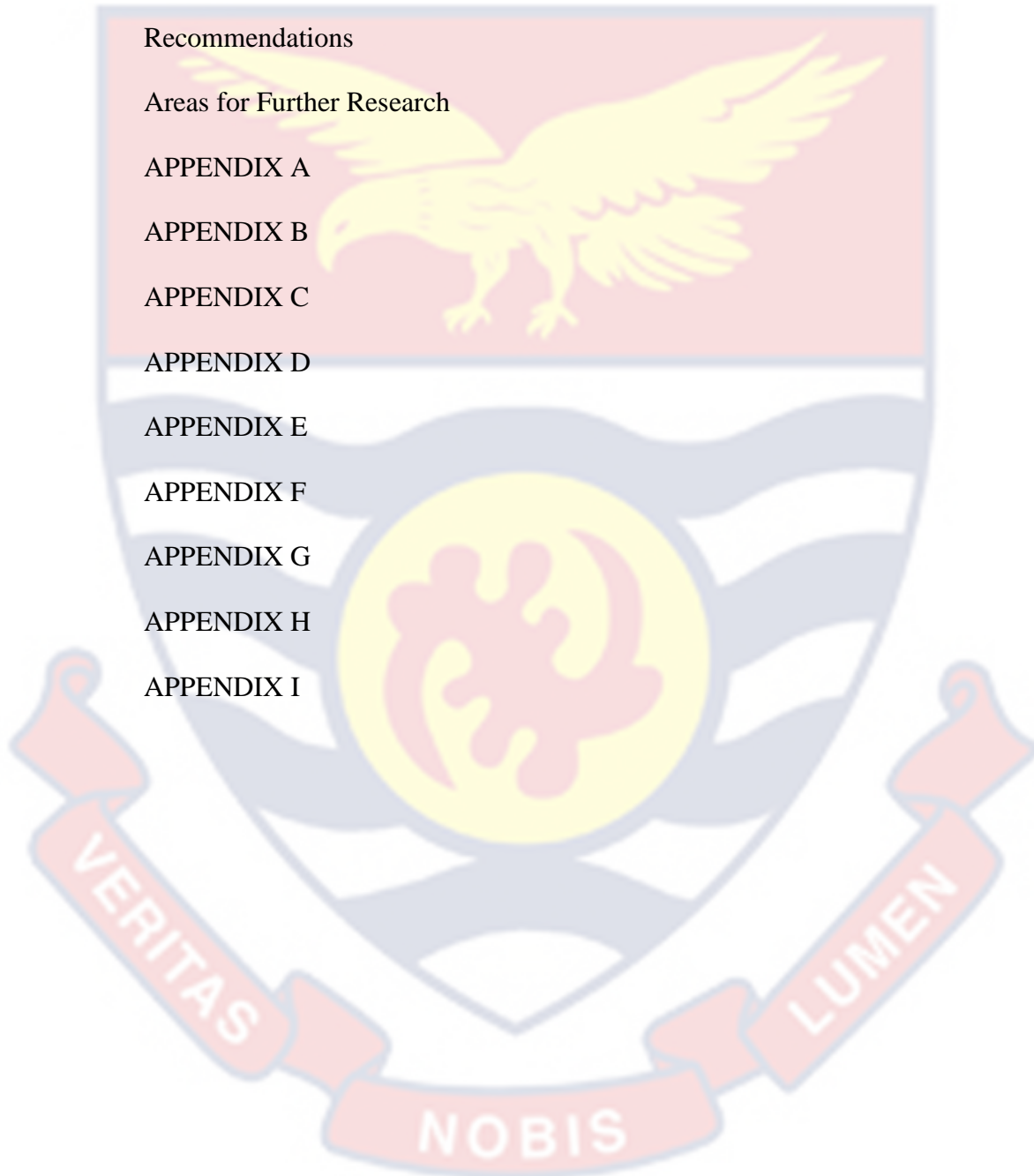
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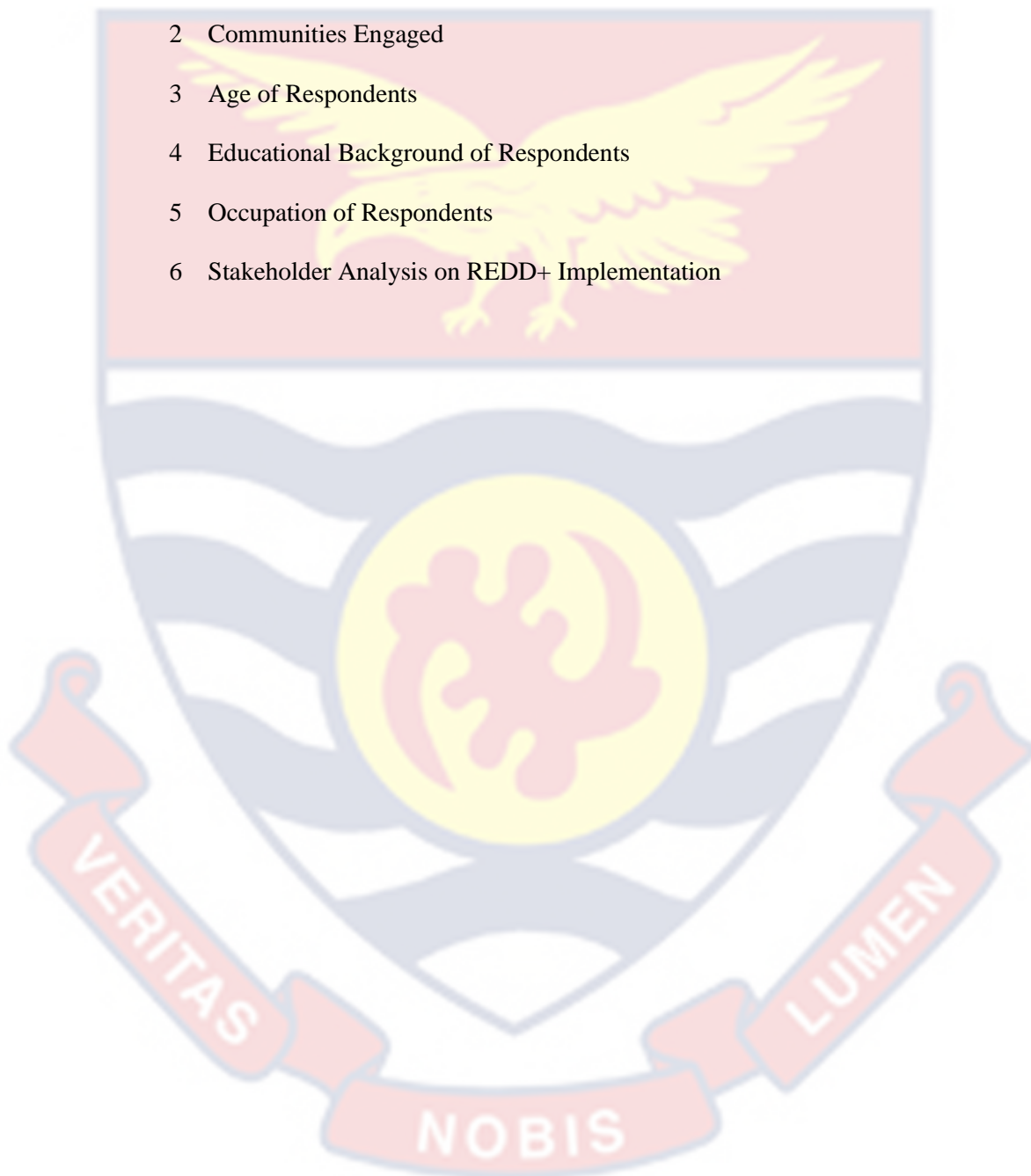
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LIST OF ABBREVIATIONS

REDD+: Reducing Emissions from Deforestation and Forest Degradation and the relevance of forest conservation, sustainable management, and increased forest

carbon storage.

R-PP: Readiness Preparation Proposal

UNFCCC: United National Framework Convention on Climate Change

HIA: Hotspot Intervention Area

FCPF: Forest Carbon Partnership Fund

CSC: Climate Smart Cocoa

FC: Forestry Commission

FGD: Focus Group Discussion

RBA: Right-Based Approach

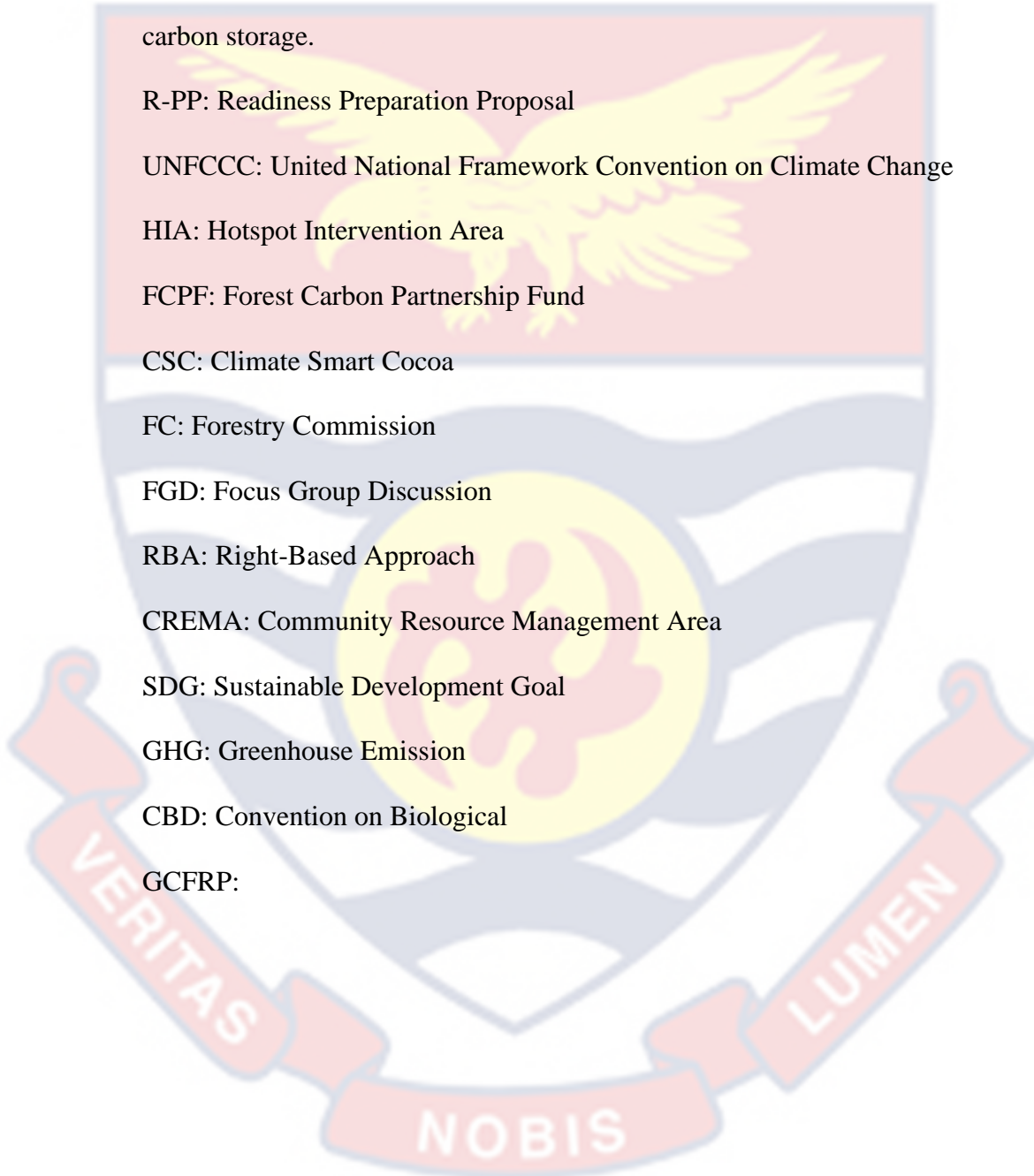
CREMA: Community Resource Management Area

SDG: Sustainable Development Goal

GHG: Greenhouse Emission

CBD: Convention on Biological

GCFRP:



CHAPTER ONE

INTRODUCTION

Background to the Study

The value of forests no longer remains with its ability to provide timber, wood fuel, medicinal plants, charcoal, fruits or game (Preez, 2013). In addition to providing timber and non-timber forest products (NTFPs), forests also provide a number of ecological services. They control soil erosion; help regulate rainfall and water yield (hydrological services) and store carbon. Contemporarily, global best practices now dictate and stipulate that forests are managed for the numerous benefits they provide (Preez, 2013). The benefits of forests are realised at local, national and international levels. Mostly, there are differences in the interests and levels of different actors and sometimes results in conflicts issues.

Economics for the Environment Consultancy (EFTEC), in a report provides the benefits of forests and classifies them as being a local benefit, national benefit or a global benefit (Newcome, Provins, Johns, Ozdemiroglu & Ghazoul, 2005). An example is, Timber which falls under forest products provides benefits at all three levels while carbon storage and sequestration is regarded as providing global benefits.

The carbon benefit of forests emanates from the ability and capacity of the intact forests to store carbon, which escapes into the atmosphere when trees are burned or decompose. Forests are now considered a global public good due to the fact that they have the potential to reduce the quantity of Carbon Dioxide (CO₂) in the atmosphere. This forms the basis of REDD+ which means Reducing

Emissions from Deforestation and Forest Degradation and the relevance of forest conservation, sustainable management, and increased forest carbon storage in developing nations (Bartholdson, Abdallah, Marquardt & Salomonsson, 2019).

It is a voluntary mechanism under the United Nations Framework Convention on Climate Change (UNFCCC), born out of the knowledge that deforestation and forest degradation significantly affects the global carbon cycle (Schulze, Beck, & Müller-Hohenstein, 2002). Basically, REDD+ can be described as the practical and conscious approaches with positive incentives to cause reduction in emissions from forest degradation and deforestation, and to provide support for sustainable management of forests, conservation of forest carbon and the enhancement of forest carbon stocks in developing countries.

Generally, Reducing Emissions from Deforestation and Forest Degradation (REDD+) has appeared as a possible strategy for decreasing emissions from the forestry sector and promoting sound forest governance. Even though the mechanism has been officially acknowledged since the 15th Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC COP 15, 2009) in Denmark, numerous issues regarding the development and execution of national REDD+ systems remain unsolved.

On one hand, it is expected that REDD+ produces various kinds of benefits to participants, both monetary and non-monetary. Non-monetary benefits include sustainable agriculture, sustainable forest governance, capacity building, biodiversity conservation, alternative livelihoods and social infrastructure development. The monetary benefits which are in the form of financial payments

are compensation for opportunity cost associated with the non-use of the forest which are direct payments to individuals and communities for changing their land use for forest conservation and reduced carbon emissions; funding for activities that promote REDD+ implementation; and REDD+ rent which is explained as the net benefit from trading carbon credits (Dumenu et al, 2014).

On the other hand, many communities who depend on forests for their livelihood, survival, and shelter have had their interests and rights highlighted in regards to the possible impact of REDD+ on their rights and interests. (Kelly, 2010). These concerns specifically relate to the potential loss of rights to use, access, and/or own traditional lands and natural resources by local communities, the loss of traditional territories, and the marginalisation of local communities from the design and implementation of REDD+ strategies and policies; lack of fair and equitable benefit sharing of REDD+ activities; and loss of traditional ecological knowledge.

In order to ensure that all discriminatory practices and unfair distribution of power and benefit which hinder progress in development are corrected, the rights-based approach (RBA) (United Nations, 2016) is to be employed in REDD+ design and implementation. In most countries, customary rights of forest dwellers and forest fringe communities are recognised through customary laws to protect livelihoods as these communities depend on forests. Government policies which recognise such customary rights empower forest communities to access and use the forest resources in a way they are traditionally accustomed, to manage and protect these forests.

The issue of rights and interest of communities that dependent on forest as well as the sharing of benefits that emerge from REDD+ initiatives has to do with environmental justice and that forms the philosophical basis of this study. Greiber (2009) posits that the adoption of a rights-based approach in conservation and development is a means and a strategy to ensure conservation and development with justice. This argument falls in line with Rawls' argument on justice which opines that a just society is one where the civil and political rights of people are promoted and that all individuals with same efforts and abilities must be assured and promised equal opportunities (Follesdal, 2014).

Power relations in a society determines how less powerful people are considered in benefit sharing as well as respect for their rights. Neoliberal practices facilitate the material interests of politically and economically powerful elites promoting unequal power relations in the society.

More specifically, the issues of rights of local communities, involvement in design and implementation and the benefit sharing could at least be addressed if the human rights responsibility of states in the implementation of REDD+ are strongly taken into consideration. Although the UNFCCC does not explicitly include what is expected of parties, the Cancun Agreements state that parties must adhere to the highest standards of human rights "in all climate change related actions" (UNFCCC COP 2010). The Cancun Agreements demand that parties, with particular reference to REDD+, address issues with forest governance, land tenure, gender consideration, and full and effective participation of stakeholders

when activities, plans, and strategies are being developed and implemented (UNFCCC COP 2010).

These requirements and obligations of countries implementing REDD+ programmes and projects are individually broad issues that could and should be generally studied. However, for the purpose of this study, the obligation of addressing forest governance issues and ensuring maximum and effectual participation of stakeholders when action plans and strategies are being developed and implemented will be specifically considered. According to the public choice theory, self-interested utility maximization serves as the basis for aggregate political decision-making and this is on the part of all affected individuals, which includes interest groups and the general public. It is therefore important to ensure full participation of all stakeholders while addressing issues in governance of forest in the implementation of REDD+.

Benefit sharing in REDD+ implementation has drawn a great deal of attention from local communities and policymakers. REDD+'s ability to achieve effectiveness, efficiency, and equity will unquestionably depend much on how its benefit sharing mechanisms, which will function at several levels of governance, are designed and implemented. Benefit sharing mechanisms are defined as a range of institutional mechanisms, institutions, and governance structures for allocating funds and other benefits (Vhugen & Miner, 2011). Benefit sharing mechanism in REDD+ could either be vertical which refers to the flow of benefits from national level to local level, horizontal which indicates a distribution within and between

communities, households and individuals or a combination of the two approaches (United Nations Environment Programme, 2011).

Whatever shape a country's benefit sharing mechanism takes, it should incorporate the 3Es: Effectiveness, Efficiency and Equity. Benefit sharing in REDD+ could be described as a market-oriented arrangement for benefit sharing. This is due to having voluntary exchanges to support quid pro quo relationships in REDD+. Such relationships are considered to be reciprocal in the sense that parties involved offer in return for something (Nkhata, Breen, & Freimund, 2008).

Consequently, another form of property right has been introduced as a result of the forest playing a role in climate change mitigation, and this is known as carbon rights. Carbon rights allocation in the implementation of REDD+ is very critical and important for the sharing of benefits (Yeang, Sherchan, Heffernan, Chapman, Dooley & Engbring, 2014). Over the years, the international framework for REDD+ implementation has not been able to give a succinctly clear definition of carbon rights. However, in an attempt to explain carbon rights, the concepts of sequestered carbon and carbon sink are worth considering. According to Yeang et al (2014), carbon rights is referred to as a tonne of sequestered carbon, legal and recognizable rights to own carbon sequestered or sunk, or generally a moral claim and request to benefits associated with and emanating from stored carbon.

Ghana is a country with its forest lands enriched with a collection of natural resources that are land based. Over the years, Ghana has achieved moderate economic growth and development but this has been at a significant cost

to the forests. Close to 60 percent of the country's forest cover has been lost since 1950 (Acheampong, Macgregor, Sloan & Sayer, 2019) and the present rate of deforestation is approximately 3 percent per year (135,000 ha/year) (Ghana REDD+ Datahub, 2021). This indicates a doubt in the future of Ghana's forest cover and its security.

There is a strong need to protect the forests of Ghana from forest degradation and deforestation. This is because in the first place, many unseen ecosystem services that hold up the country's most cardinal agricultural sector are provided by the forest and as the country loses its forest ecosystem, the loss poses a threat to the provision of some of the products for foreign exchange. One of the major global contributors to climate change is deforestation and this happens through the release of CO₂. Climate change presents a number of threats to Ghana just like any other country in terms of sea level rise temperature increase, and changes in the patterns of rainfall. All of these problems and challenges as threatened by acts of forest degradation and deforestation reveals that efforts to combat and mitigate climate change is of utmost importance (Amoah & Korle, 2020)

Ghana's intention and efforts to implement forest sector initiatives, which includes Voluntary Partnership Agreements (VPAs), Forest Investment Programme (FIP) and Reducing Emissions from Deforestation and Forest Degradation (REDD+) requires stable, just, and equitable land-tenure systems to be successful (MLNR, 2016). Ghana's involvement and engagements in REDD+ began in 2008. A Readiness Project Idea Note (R-PIN) was developed and in

2010, the country got approval for its Readiness Preparation Proposal (R-PP). After this step, Ghana has focused on creating the needed systems and capacity to support the design, implementation and monitoring of activities and programmes under REDD+ (Ghana Forestry Commission, 2015).

Since 2016, Ghana has implemented series of activities, projects and programmes under the REDD+ initiative and these include the Ghana Cocoa Forest REDD+ Programme (GCFRP), Forest Investment Programme (FIP) and the Shea Savanna Woodland Programme. The nested approach to REDD+ implementation in Ghana indicates that there is a combination of the two main axes (Vertical and Horizontal) along which benefit sharing mechanism could be organised (Ghana Forestry Commission, 2016).

The implementation of REDD+ in Ghana demands a strong need to consider the country's forest and land policy. From the Ghana National REDD+ Strategy by the Ghana Forestry Commission (2015), one of the objectives of Ghana's 2012 Forest and Wildlife Policy is to encourage and develop methods for transparent governance, equity sharing, and citizen participation in the management of forest and wildlife resources. The idea of participatory forest management acknowledges local people's rights to exploit natural resources. According to Ghana's land policy, any decisions made regarding the use of land must take into account protecting the rights of the present generation.

In forest management, failure to protect land rights and domestic use rights of forests place the vulnerable groups at the most risk (Agyeman, Kasanga, Danso, Marfo, Whiteman, Asare, Yeboah and Agyeman, 2003). Rights of forest

dependent communities in this study are explained as opportunities or customary rights enjoyed by communities within and around forests to have access to and use the forest or forest products (Husseini, Kendie and Agbesinyale, 2020).

Dumenu et al. (2014) made recommendations on institutional setup and responsibilities for implementing the full REDD+ benefit sharing plan and this serves as the yardstick for Ghana's broad strategy on carbon rights and benefit sharing. The institutions with their respective functions are National Carbon Fund, Independent Monitoring and Audit Group, Multi-stakeholder Governing Body, Carbon Registry and Project Implementation Body. The National Carbon Fund is set up with the purpose of ensuring an effective implementation of REDD+ through serving as a channel to receive all funds and revenues for national REDD+ projects.

Independent Monitoring and Audit Group is set up in the implementation of REDD+ to ensure accountability and transparency, particularly in the payment of REDD+ benefits while the Multi-Stakeholder Governing Body is in charge of all technical and financial administration of the REDD+ projects. Also established at the district level, the Project Implementation Body is in charge of REDD+ project coordination, management, and benefit payment at the local level (Dumenu et al, 2014). However, this study will focus only on the Multi-Stakeholder Governing Body and the Project Implementation Body. This is because investigation in rights and sharing of benefits that emanates from REDD+ projects at the district level or community level would require focus on

institutions responsible for the implementation at the district level and in charge of financial administration of the projects.

The political-economic conditions of countries create risks for the execution of REDD+ and the sharing of benefits. For example, conflict between stakeholders and government agencies over the capture of potential benefits could lead to a reduction in efficiency, and insecure and unclear land tenure creates injustices and has the potential of compromising equity (CIFOR, 2014). This study is motivated and informed by the understanding that politics and interests of actors that formulate, shape and implement policies are of fundamental importance to the implementation of REDD+. If local communities feel disadvantaged and do not provide their support, all efforts to successfully implement REDD+ will be fruitless.

The Kakum Conservation Area known as the Kakum Hotspot Intervention Area (HIA) with an ongoing REDD+ project was selected for the purpose of the study. The Kakum Hotspot Intervention Area (HIA) which is located in the Central Region has REDD+ projects conducted by the Ghana Forestry Commission, CocoBod, Nature Conservation Research Centre (NCRC) and other Community stakeholders.

Statement of the Problem

The legal framework of Ghana's forestry sector presents a major challenge to sharing of REDD+ benefits in an equitable and fair manner. This has been as a result of the land and tree tenure insecurity for forest dependent communities and local people who live with and nurture trees in off-reserve areas. Ghana's

National REDD+ Strategy Paper (2015) acknowledges that the nature of the country's tree tenure system, as well as forest ownership, makes the issue of benefit sharing far from settled. The REDD+ strategy paper discloses that while land is owned by one party, accessibility towards certain resources including trees on the land may be held by a different entity. This complicates Ghana's tenure system.

The issue of plurality in different land tenure arrangements and elite capture in the sharing of benefits such as cocoa seedlings and farm implements are prevalent in the district where the Kakum Hotspot Intervention Area is located (Nasser, Maguire-Rajpaul, Dumenu, & Wong, 2020). This includes corrupt activities in the distribution of benefits such as cocoa seedlings and farm implements as well as the ownership of farmlands on long-term or short-term leases. The implementation of REDD+ and the sharing of gains from REDD+ are challenged by the pluralistic nature of the land tenure arrangements.

Although local communities form a critical part of the whole REDD+ idea, the problems identified in this is that what rights do these local land and forest users have in terms of carbon credits and other benefits for playing a part in carbon sequestration. If local users do not and cannot own trees with REDD+ benefits store in them, how then do they have any right over the benefits. According to the tree tenure and profit sharing framework in Ghana (2016), majority of the studies done to understand the difficulties in achieving sustainable forest management in Ghana come to the conclusion that "existing tree tenure regimes has been widely viewed as a strong deterrent to sustainable management

of forest" with complicated benefit sharing arrangements as the root cause of the issue.

According to Ngom (2015), REDD+ strategies in the management of forest resources by Ghana's first phase of REDD+ was characterized by gaps and challenges with relations to benefit sharing mechanisms and an omission of a system for monitoring co-benefits, safeguards and guarantee issues. Empirically, studies have mostly been on the general implementation of REDD+ in Ghana but not specifically on the issues of equity and justice in the development process. Issues on benefit sharing in REDD+ has also not been given much attention in the literature. This study focuses benefit sharing, equity and justice issues.

Objectives of the Study

The general objective of the study is to explore the political economy of REDD+ implementation in Ghana with a focus on the rights of forest dependent communities and the sharing of benefits in the HIA. Specifically, the study seeks to:

1. Investigate the state of REDD+ benefit sharing in the Kakum HIA.
2. Examine the factors that affect the flow and sharing of REDD+ benefits in the Kakum HIA.
3. Assess the effect of REDD+ implementation on access, ownership and use of forest by local communities in the Kakum HIA.
4. Make recommendations on the attainment of more equitable benefit sharing systems.

Research Questions

1. How does the REDD+ benefit sharing in the Kakum HIA address the 3E's of Benefit sharing mechanisms?
2. What are the factors that affect the flow and sharing of REDD+ benefits in the Kakum HIA?
3. How does REDD+ projects affect access and use of forests and forest products by local communities in the Kakum HIA?

Significance of the Study

The implementation of REDD+ in any country demands the support of forest dependent communities to be successful. Since REDD+ is a performance-based system which seeks to provide benefits to participants, there is a need to ensure an equitable benefit sharing else the whole programme will be undermined. This study will help to facilitate understanding of the issues surrounding REDD+ benefit sharing and rights of forest dependent communities. An arrangement for an equitable sharing of REDD+ benefit will help to compensate local land and forest users for their opportunity cost in allowing trees to grow on their lands instead of removing them for agricultural purposes. This supports the United Nations' Sustainable Development Goal 15, which is about the restoration, protection, and promotion of sustainable use of terrestrial ecosystems and the sustainable management of forests.

Moreover, concerns about the rights of people living in communities that depend on forests will be raised, which will ultimately assist duty bearers in respecting, promoting and protecting the rights of local communities when

designing and carrying out REDD+ projects. The study with benefit sharing focus would provide information on the state of sharing of benefit from REDD+ projects to the Ghana Forestry Commission and this can lead to better planning and changes in the policy. Ultimately, the study will help in the implementation of REDD+ projects by the Ghana Forestry Commission (GFC) as stated by Sustainable Development Goal (SDG) 13 to take swift action to reduce the effects of climate change.

Delimitation

The study is delimited to all parties involved in the Kakum HIA REDD+ implementation in Central Region. In terms of geographical delimitation, the research is delimited to communities that are close to forests or mainly depend on forests for livelihood. The study mainly focused on exploring benefit sharing and the rights of local communities that depend mainly on forest in the implementation of REDD+ in the Kakum HIA.

Limitations

Since the study was focused on stakeholders in the Kakum HIA, which were mainly farmers, it was difficult to reach respondents because of their tight schedules and unavailability. This was resolved by having the Community Resource Management Area (CREMA) executives to give participants ample time and choose their comfortable time to have the interview or discussion and those not available for in person interviews were engaged via phone with permission to record. Also, because this is a qualitative study, the beliefs, views and opinions of the researcher are regarded as a threat and can influence the analysis and

interpretations of results. With knowledge of these facts, I was very objective and cautious in the results analysis and discussion to ensure that the results presented are in their purest nature or form and not influenced by my personal views.

Organization of the Study

There are five chapters in this study. The first chapter introduces the background and problem of study, lists the objectives and their corresponding research questions, and then discusses the study's significance. Chapter Two review literature pertaining to the concepts and theories that form the basis of the study with other empirical studies. It discusses the, Rawl's justice theory which provides the basis for equity in benefit sharing. The chapter then reviews theories like public choice, Right Based Approach (RBA) to development. This section also reviews benefit sharing, land and forest tenure, forest dependent community, political economy. The study's conceptual framework is located in this chapter and the final section of this chapter discusses four empirical studies.

Chapter Three introduces and discusses the methodological approach and issues in the study. Chapter Four provides the results and discussion from the study and Chapter Five then finally dwells on the summary, conclusions and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter mainly focuses on the review of literature on the theoretical, empirical and conceptual framework of the study. Firstly, the theories which form the bases of the study are reviewed, providing their main tenets, strengths and weaknesses. Specifically, the theory of Justice by Rawls, the Public Choice theory, Environmental Justice and the Right-Based Approach (RBA) to development are reviewed as the study's theoretical framework. The chapter also reviews concepts including, Reducing Emissions from Deforestation and Forest Degradation (REDD), Reducing Emissions from Deforestation and Forest Degradation and the role of sustainable forest management (REDD+), benefit-sharing, protection of rights, political economy, land tenure and human rights. This chapter also reviews other empirical studies that are relevant to the issue and study's objectives.

Theoretical Framework

Before moving into the conceptual and empirical discussion on benefits sharing and rights of forest-dependent communities in the implementation of REDD+, it is important to first review the theories that form the basis of the study, thereby situating the argument within a theoretical context.

Rawls's Theory of Justice

Justice is seen as fairness in the theory of Justice by Rawls. This theory was propounded by John Rawls in 1971. The theory argues that justice consists of the fundamental principles of governance that, in a hypothetical case of perfect equality, free and rational people would all agree upon. It is adopted for the study due to how local communities and stakeholders agree to accept the REDD+ and take part in the activities to receive some incentives. This theory holds that a reasonable and sufficient account of justice cannot be obtained from utilitarianism. This is mostly because of the utilitarian ideology or doctrine's innate adherence to unfavorable types of government that neglects the rights and interests of the minority in order to increase the pleasure of a larger group of people. According to Follesdal (2014), Rawls outlines several ideals for a just society that people should uphold.

It is emphasized that the basic ideas behind these principles are that all persons' political and civil rights must be respected and that they must all be given equal opportunity based on their efforts and skills. Follesdal (2014) also indicates that Rawls' theory of Justice is an alternative to utilitarianism. Most philosophers, economists and politicians in the past centuries advocated for utilitarianism which asserts the principle of welfare maximization. In Utilitarianism, it is okay or better to ensure and promote the overall welfare at the expense of an individual, if necessary.

Rawls' theory of justice challenges this by claiming that individuals in a society or a country have rights that cannot be simply overlooked and sacrificed

to ensure others gain more benefits. This theory is used because in the implementation REDD+ all stakeholders should agree upon the principles of the programme and the arrangements for the sharing of benefits should not be done at the expense of minority groups.

Embedded in this justice theory are the principles of distributive justice, which are the principle of liberty; stating the idea of economic and social inequalities as well as the idea that every person has the right to a set of fundamental rights that are equally rewarding. There are two sub-principles that make up the main principle of economic and social inequalities. The first is the idea of equality of opportunity, which holds that everyone with the same willingness and aptitude should have an equal opportunity to access all positions, both social and economic. The second sub principle is the difference principle which according to Rawls, economic and social inequality can only be justified if and to the extent that it benefits or favors those who are deemed to be least advantaged in society. (Follesdal, 2014).

This means that the tiniest portion of the social pie should be as big as it can be. Any society that upholds these ideals gives the concept of liberty top priority. Thus, while encouraging equal opportunity or tolerating economic inequality, social institutions in society as a whole must not infringe others' fundamental rights and liberties. In a similar manner, the equality of opportunity principle triumphs over the principle of difference. Therefore, to improve the wealth and income of people that are worse off, equality of opportunity as a principle cannot be sacrificed. The theory is appropriate in explaining why

individuals or members of local communities should sacrifice their land and forest use for the purpose of climate action from the perspective of these local land and forest users.

Aside these main tenets and strengths of Rawls theory of Justice, there are some weaknesses as put out by critics of the theory. Some critics argue that Rawl's theory does not respond to all the political and ethical challenges faced in the society (Choptiany, 1973). The principles of justice as proposed by Rawls are intended to be applied to society's basic institutions. They are not necessarily valid for other distributional issues but generally, the principle of distributive justice in the theory covers such issues. It is also argued that the principles proposed by Rawls were meant to be primarily applied to a well-ordered society. What should be done when there are unjust arrangements in the society, are issues barely addressed by the theory, e.g., in a situation where there is civil unrest.

Last but not least, Rawls assumes that there are favorable conditions that could guarantee political and civil liberty, and these are sufficient to meet necessities (Doppelt, 1981). The fact is that certain nations or localities lack these elements, which implies they lack the necessary economic foundation to protect civil and political liberties. This is a particular reason why in an attempt to ensure justice in conservation and development, the Public Choice approach where interest groups fight for benefits from the government and the Right-Based Approach (RBA) should be employed.

Public Choice Theory

The public choice theory serves as the foundation on which the new political economy with its literature is built. The theory was propounded by James M. Buchanan and was essentially developed in the aftermath of the Second World War and later on gained intensity from the 1960s to 1970s. The failure and inadequacies of methods, approaches, or principles for the allocation of resources between institutions and individuals in political science related to economics have led to the adoption of economic methods and analyses.

Correspondingly, the failure and inadequacies of scarce and limited economic approaches to resource allocation and also to understand and solve problems relating to politics and governance have also led to the adoption of methods in political science (Borooah, 2005). This has led to the acceptance of the idea that economic methods could be useful in understanding the conduct of government and institutions that has public welfare as a priority, and this represents the backbone of the literature of public choice.

According to the public choice theory, all parties involved in a political decision, such as bureaucrats, politicians, interest groups, or the general public, have a self-interested utility maximization as their guiding principle. According to the theory, policies are the outcome of the strategies used by policymakers to combine the self-interest of everyone involved in the process of decision-making. This is because it is assumed that people who are involved in the policy process try as much as possible to maximize values that are vital to them as individuals.

Mueller (1989) posits that the focus of the theory is on a policy's distributional and efficiency effects.

The public choice approach attempts to estimate the likely behaviour of interest groups while building on the assumptions about individuals. The role of interest groups is considered central in the theory. Interest groups seek and advocate for regulations that will promote their interest. The theory assumes that political outcomes and policies are influenced by powerful interest groups. These interest groups as well as individuals with interest compete for benefits from the government. When these groups or individuals anticipate gains or benefits from a particular policy, they find ways and means to ensure its adoption and also support its implementation.

According to Stigler (1971), the major concern of interest groups in the public choice approach is to seek redistribution of wealth through the regulatory process and this is why the theory is adopted for the study. In analyzing a policy problem, the theory considers groups of interest, although the methodological basis is the individual. According to Brennan and Pincus (1983), the theory postulates that small, homogenous groups of people react to their common economic prospects in a manner remarkably similar to that of a single person: a person acts if, on the margin, gain outweighs cost. The sum of the advantages may significantly outweigh the sum of the costs for a sizable, varied group.

There have been some critiques of the public choice theory and these point out the problems associated with the theory. It is argued that there is a high cost associated with obtaining information about a policy when there is a change or a

policy proposal (Gow, 1994). Information could be supplied efficiently by some interest groups but they are more likely to provide information that favours their position on the subject of the policy. This leaves consumers most likely to be ignorant of the policy or processes. In addition, participation in the policy process could be very costly. This, therefore, leads to consumers not becoming involved in the policy process or implementation process and therefore their interest is ignored. Both the Rawls theory of justice and the public choice theory do not focus on environmental issues in the society and as this study is on environmental protection, it is important to introduce the environmental justice theory.

Environmental Justice

Environmental justice demands that all public policies should be based on fairness and respect for all people and ultimately be devoid of any form of discrimination or bias. This theory was produced from the environmental justice movement in the 1980s and was developed by David Schlosberg. Environmental justice is explained as the distribution of benefits and burdens out of the exploitation and use of natural resources that are of common interest and this is why the theory is adopted for this study (Mohai, Pellow & Roberts, 2009).

According to the United States Environmental Protection Agency (2017), is the equitable treatment of all people, regardless of their race, income, or country of origin, in the development, formulation, execution, and enforcing environmental laws, policies, and regulations. Planning and developing a benefit sharing structure or system for the of REDD+ initiatives implementation should be built on fairness for all parties and meaningful participation from all

community stakeholders. Environmental justice also focuses on ensuring fairness in the distribution of environmental benefits and burdens.

Environmental justice demands that individuals have the right to participate as equal partners in the needs assessment, planning, implementation, enforcement, and evaluation of policies at all levels of decision-making. (Ramirez-Andreotta, 2019). Additionally, environmental justice demands that farmers not be compelled to select between unemployment and an unsafe way of life and that they have the right to a healthy and safe work environment. According to Bullard (2018), environmental justice is explained as the principle that “all people and communities are entitled to equal protection of environmental and public health laws and regulations.” He contends that the environment essentially encompasses everything, including the natural and physical world, where we work, live, and play. Consequently, it is impossible to separate the physical environment from the cultural environment.

Despite the advocacy for ensuring environmental justice in all endeavors, including developmental projects, the claims for environmental justice remain contentious (Mohai, Pellow, & Roberts, 2009). This issue of these claims been contentious has been for three reasons. First of all, many critics claim that the mainstream environmental movement continues to disregard social justice and equality issues. Early environmental activists and scientists paid little attention to underlying and pervasive structural injustices that encourage uneven exposures to pollution in society. Environmentalists are currently debating whether to try to address these concerns or just concentrate on those they can more easily impact.

Second reason is that after an injustice has been documented or witnessed, it is not immediately obvious what should be done. Public policy initiatives to combat environmental injustice may need costly, intricate, and occasionally global measures. Last but not least, it has been challenging to document the "disproportionate impact" on populations of color or the impoverished (Mohai & Saha, 2007). All the three theories as reviewed do not centrally focus on the rights of people. As this study has an objective to assess effects of REDD+ implementation on rights of forest dependent communities, it is important to have a theory that holds rights at the core of development.

Right-Based Approach

The rights-based approach (RBA) emerged as a new paradigm in development before the start of the twenty-first century through the United Nations (UN). The approach was used in many articles, policy papers, official documents of multi-lateral development agencies and numerous non-governmental organizations (NGOs) within less than a decade after its introduction (Kindomay & Ron, 2011). The RBA is an approach to development that considers and places the issues of human rights at the heart of concerns to human development. In this sense, the right-based approach re-conceptualizes the traditional approach to general development and human development and the process by which these developments are realized.

In all facets and dimensions of programme and project development as well as its execution, the strategy is focused on the purposeful and systematic advancement of human rights (United Nations, 2016). The RBA is a system

developed for the human development process, which heavily relies on standards of international human rights, and eventually in activities aimed at promoting human rights. The approach is adopted for this study due to the objectives of the study to assess how the implementation of REDD+ has affected the rights of local and forest dependent communities.

The RBA has two main goals: to enable "right-holders" to assert and use their rights, and to ensure or develop the capacity of "duty-bearers," or those who have the responsibility to uphold, defend, and respect the rights of the poorest, weakest, and most disadvantaged (United Nations, 2016). The fulfillment and protection of rights should not be limited to the poorest or most vulnerable people in the society but every member of the society irrespective of their status. While the term right-holder as indicated in the above statement is used to refer to social groups or individuals that hold specific entitlements to certain rights.

Generally, the phrase "duty-bearers" is also frequently used to refer to actors of the state and other official authorities at all levels of governance, even though the Universal Declaration of Human Rights generally recognizes that all people are rights-holders. The responsibility of the state to protect and respect the rights of people arises from their ratification of international conventions and therefore the state is the ultimate duty-bearer. The core basis of the RBA is created by the Universal Declaration of Human Rights (UDHR 1948) and other instruments of international human rights.

The Rights-Based Approach recognizes and accepts that it is impossible to have duty-bearers always being able to comply with all their responsibilities and

obligations due to numerous reasons. As a way to address such a challenge, all parties involved in development initiatives, including NGOs and the local government, join together to collaborate with communities to strengthen the ability of the duty-bearers to deliver services more effectively. One of the core principles of the RBA is that it makes sure that views of people, or right-holders, are critically taken into account in local communities by encouraging participation and interaction, leading to a greater understanding of the issues of concern (UNICEF, 2015). This suggests that the strategy is seen as a method to reach the most vulnerable, underprivileged, and marginalized individuals. It ensures that projects undertaken in local communities are not planned in isolation from what issues are in reality and without proper consideration of the perspective of right-holders as well as duty-bearers.

Filmer-Wilson (2005) argued that a human rights-based approach to governance and development or the promotion and protection of human rights is essential for attaining peace, security, and democracy and is also considered as an essential tool for achieving sustainable development. For purpose of this study, rights of forest dependent communities are explained as opportunities or customary rights enjoyed by communities within and around forests to have access to and use the forest or forest products (Husseini, Kendie and Agbesinyale, 2020). Also rights in this study are associated with what participants and stakeholders of the REDD+ programme deserve as benefits for being part of the projects. In most countries, customary rights of forest fringe communities are recognized through customary since these communities depend on forests for their

livelihoods. Government policies which recognizes such customary rights empowers forest communities to access and use the forest resources in a way they are traditionally accustomed, to manage and protect these forests.

Among the benefits of employing the RBA are participation of local individuals and communities strengthened or increased, improvements in transparency and accountability, and reduction in vulnerabilities by making the most marginalized and excluded, the focus. On the other hand, Broberg and Sano (2018) argues that the RBA to some extent is not appropriate and suitable for all types of development and cannot be applied to all types of recipient communities. The approach is more likely to focus on enabling the duty-bearer, mostly public authorities to respond to requests of the ultimate recipient of assistance in development and to ensure the fulfillment of minimum core rights while giving a less focus on service delivery and general capacity building.

It is also revealed that when the RBA is being implemented, the actors are challenged with a decision as to make trade-offs between promotion and protection of rights and efforts of maintaining a relationship considered satisfactory with public authorities. The RBA can also lead to the promotion of inequalities and conflict among groups in society. This could be as a result of favouring some groups considered to be marginalized in preference to others or discriminating against them (Hickey & Mitlin,2009).

Empirical Review

Sherpa (2014) conducted research into the sharing of REDD+ potential benefits in Nepal. The study's objectives were to give more insight into the potential negative effects of REDD+, what equity, effectiveness and efficiency in REDD+ benefit sharing means, mechanisms to achieve equitable benefit sharing, factors that influence the flow and sharing of benefit from REDD+ in Nepal and how to promote equitable allocation and sharing of REDD+ benefits. The study employed the qualitative approach in research to answer the question of the study with case study as the specific study design. Data for the study were primary and secondary, collected through purposive sampling were used in the research. The primary data for the study were collected through interviews with 31 respondents.

Sherpa's study reveals that there should be conscious efforts to realize and reward the activities and efforts of local people in the management and conservation of forests for the achievement of the primary objective of REDD+. In the sharing of benefits from REDD+, specific guidelines that help decision-makers on how benefits should be shared seem to be suitable at different levels in the country. Benefit-sharing or distribution is both at the national level referred to as vertical and at the local level also referred to as horizontal benefit distribution. In the vertical benefit distribution, the government of the country should allocate the benefit based on the performance or contribution and carbon ownership by the forest managers, while in the horizontal benefit distribution, communities should be allowed to have the authority to share the benefits based on their own needs.

However, the factors (local governance, government arrangements and local community conditions) that influence the sharing and usage of benefits must be critically considered. In identifying the potential mechanisms of sharing benefits equitably, Sherpa reveals that there should be transparency, an effective dispute settling mechanism, engagement with the right stakeholders and determination the right form of incentive. Sherpa also revealed existing contextual factors that affect the flow and sharing of REDD+ benefits. Issues such as “elite capture”, differences in internal interests and culture of communities, price of carbon, property rights and the role of local government are factors that either positively affect or negatively affect the flow and share of REDD+ benefits in Nepal.

In 2013, Mulyani and Jepson performed study on Indonesia's REDD+ programme and forest governance. Based on interviews with 60 selected respondents impacting REDD+ policies in Indonesia, the study focused primarily on the perceived opportunities and constraints of REDD+ implementation. The study employed the qualitative approach in research with purposive sampling as the technique for sampling and key-informant interviews as the data collection method. Data gathered were analyzed using content analysis which is a data analysis technique in the qualitative approach to research. The approach employed in this study was appropriate because it allows for a greater understanding of the issues in REDD+ and forest management.

The study revealed that challenges for the implementation of REDD+ include: Challenges with coordination, notably those involving conflicting

interests, overlapping authority, and "Ego Sectoral"; The complication of REDD+ and stakeholders' misunderstandings; The ramifications of a future climate agreement's uncertainty and how it will affect REDD+; Lack of capacity; The ambiguity of forest-related laws and the potential for corruption.

Specifically, on the issues of coordination as a challenge to the implementation of REDD+, according to Mulyani and Jepson, it is exceedingly difficult to coordinate across the ministries responsible for implementing REDD+ because of disagreements over which laws are the best and the interpretations of those laws based on personal interests. Another issue is a lack of capacity, and they indicated that this provides a significant obstacle to the implementation of REDD+ at all levels as organizations and agencies responsible for managing forests are unable to, especially on law enforcement. The study revealed that legal system of Indonesia is complex as a result of the fact that each ministry has its own sectoral laws which conflicted with others and also because there were overlaps between national and subnational forest governance. This uncertainty and ambiguity in Indonesia's legal system on forests undermines the success of REDD+ implementation.

A research on REDD+ and its actors in Zanzibar was conducted by Yakub in 2017 to investigate the potential for equitable benefit sharing of future REDD+ revenues in Zanzibar. This was done by specifically exploring questions like; How are REDD+ benefits defined; How do the various actors in Zanzibar perceive the potential for future REDD+ benefits, and how are carbon right holders/REDD+ beneficiaries defined? The study employed a qualitative

approach to get answers to the research questions to achieve the objective of the study. This was appropriate because due to the nature of the study, the researcher needed an approach that would be suitable for capturing, understanding and interpreting different issues and their underlying meanings. The researcher used individual interviews, focus group discussions and document reviews as the methods for data collection with interview guides and focus group discussion guide as the instruments for data collection.

It was revealed that local communities believed that systems initiated by themselves for forest management and potential carbon credits are more appropriate and that there should be local community's active participation in management of forest resources. The findings of the study also show that there is a mixed perception of the benefits from potential REDD+ in Zanzibar. A part indicates that the local arrangement by the local communities could ensure equitable benefit sharing while other perceptions were that the local community's arrangement will not have the capacity to operate independently and effectively.

Myers, Ravikumar, and Larson (2015) carried out research on benefit sharing related to programmes intended to lower carbon emissions from land use in Indonesia. These include of REDD+ and protected areas, rewards for environmental services, programmes that support the growth of oil palm crops, and other initiatives. Based on information from Center for International Forestry Research (CIFOR)'s Global Comparative Study on REDD+, the study's main goal was to offer key findings on various governance and benefit-sharing systems that relate to land use modification in Indonesia. According to Myers et al., oil palm

plantations have been a significant contributor to deforestation in Indonesia. To obtain answers to the study's questions, the researchers used a qualitative method to their research. Interviews with key informants were used as the method for data collection.

Findings from Myers et al's (2015) study reveal that policies for sharing benefits which are related to various initiatives of land use in Indonesia remains difficult to have a clear capture. Non-monetary benefits such as land tenure security and access to natural resources are extremely important but are not always received. Contrarily, in many cases, the local communities bear cost and carry burdens like internal conflicts, loss of security of land tenure, loss of access to natural resources and local environmental degradation.

In general, it appears that the validity of arrangements for sharing benefit and initiatives of land use are related to the extent to which they lead to benefits and burdens, as well as the decision making processes involved. It also very critical to have broad-based consultations with local actors, including traditional authorities. Again, authorities executing initiatives at the local level should be aware of the access and control of local communities over lands so they do not end up coercing them into accepting deals on the projects. Finally, community participation should be prioritized in decision making on land use in REDD+.

Conceptual Review

Reducing Emissions from Deforestation and Forest Degradation (REDD)

The international treaty known as the United Nations Framework Convention on Climate Change (UNFCCC) developed out of several countries'

realizations to cooperatively determine what could be done to limit the rises in average world temperatures and the ensuing climate change. The treaty also looks at what these cooperating countries can do to deal with the inevitable climate change effects. There is also an agreement on an international level known as the Kyoto Protocol which is related to the UNFCCC. The interrelationship existing between the treaties is that the UNFCCC encouraged industrialized economies to ensure stability in GHG emissions and the Protocol gets these countries to pursue its realization. The Kyoto Protocol states that developed countries with emission reduction targets are given the authority to invest in another country to reduce and therefore balance the emission from them to reach the 1 percent Kyoto Protocol reductions.

Reducing Emissions from Deforestation and Forest Degradation (REDD) refers to the strategies and efforts to minimize Greenhouse Gas (GHG) emissions which happens as a result of deforestation in developing countries. This idea to reduce Greenhouse Gas (GHG) emissions developed in 2005 as an important way to help by contributing to solve the climate change problem. (Nartey, 2014).

Reducing Emissions through Deforestation and Forest Degradation and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+)

REDD+ which means Reducing Emissions through Deforestation and Forest Degradation, and the role of conservation and sustainable management of forests and enhancement of forest carbon stocks in developing countries, is a mechanism considered voluntary under the United Nations Framework

Convention on Climate Change (UNFCCC). REDD+ is an extension of REDD which delineates specific activities for conservation and is also the most developed and improved forest conservation method (Nartey, 2014). This is as a result of the knowledge that deforestation and forest degradation, particularly when biomass in the forest is burned and carbon dioxide (CO₂) is released into the atmosphere, have a considerable impact on the global climate system (Schulze, Beck, & Müller-Hohenstein, 2002).

The mechanism under the UNFCCC is to incentivize forested countries that are developing to develop and make use of new strategies in relation to land and forest use to reduce the rate at which forest is lost. This is to help in reducing the carbon emissions linked with the depletion of forest cover. Specifically, the mechanism is purposed to mitigate the 12 – 17 percent of total global greenhouse gas emissions associated with forest loss (Minang, & Noordwijk, 2014). REDD+'s basic idea is to store carbon in forests and create financial value for them, invest in sustainable development paths with low-carbon and offer incentives to minimize forest-based greenhouse gas emissions (Robles, 2015).

The programme aims to reward activities that improve the storage of carbon through forest recovery, restoration, replanting, or afforestation in addition to lowering emissions from deforestation and forest degradation (Doherty & Schroeder, 2011). Again, local communities depending on forests could enormously be rewarded for participating in sustainable forest management. The development of the REDD+ project has considerably enhanced developing countries' participation and interaction in the climate change negotiations as

compared to concerns and interests of these countries largely ignored in the past (Miles & Kapos, 2008). It has attracted many developing countries from Asia, Africa and Latin America to voluntarily participate in the mitigation exercise.

REDD+, in general, is a performance-based system that aims to offer financial as well as other types of incentives to considerably slow down or avoid the rate at which forests and lands are converted to other uses that result in carbon emissions (Asare & Kwakye, 2013). Thus, the aim of REDD+ is to reduce the Greenhouse Gas concentrations and help in the mitigation of climate change through five main sets of activities. These actions include decreasing emissions caused by deforestation, decreasing emissions caused by degradation, decreasing emissions by adopting a conservation role, managing forests sustainably, and increasing carbon stock.

Quantities from the reduction in carbon emissions are recognized as credits that might be sold on the global carbon market or provided to an international fund set up to give stakeholders and nations that take part in forest conservation financial support or compensation (Asare & Kwakye, 2013). In the context of REDD+, initiatives like the United Nations Collaborative Programme (UN REDD) and the World Bank Forest Carbon Partnership Facility (FCPF) have emerged to fund participating countries in their early activities as the UN continues to debate the financial architecture to support the mechanism.

Benefit Sharing

Benefit sharing was first introduced in the 1992 Convention on Biological Diversity (CBD), and it was further expanded and promoted in the Nagoya

Protocol, an agreement that is thought of as an addition to the CBD, in 2010. The idea emphasizes the need for local communities and other actors that live close to resource extraction areas to have a share in advantages that result from resource exploitation (Söderholm & Svahn, 2015). Benefit sharing is explained as the distribution of financial and non-financial advantages resulting from resource management and exploitation. The issues of social fairness, resource managers, resource providers, and actors who monetize the resources are at the heart of benefit sharing. An aspect of corporate social responsibility (CSR) is represented in benefit sharing, and plays a key role in bridging the gap between global beneficiaries and local communities (Schroeder, 2007). Ultimately, benefit sharing encourages sustainability in local communities and promotes long-term economic development (Cernea, 2008).

Benefit sharing has the principles of compensation and investment. According to the notion of compensation, rewards should be distributed to make up for any losses or damages incurred as a result of extraction in the past or in the future. (Wong, Luttrell, Loft, Yang, Pham, Naito, Assembe-Mvondo, & Brockhaus, 2019). Compensation for lost access to resources, pollution, land, etc. could be provided as benefits. The mechanisms and goals for benefit sharing under the compensation principle differ, but after the assessment is complete, compensation is typically a one-way transaction. After payment is made to the community, the company or government excludes itself from how to expend the benefits, while the community decides on how to utilize the received benefit. On the other hand, investments, as a principle of benefit sharing, attempts to stimulate

or provide support for current and future activities, opportunities and capacities of the local community involved.

Benefit Sharing in REDD+

According to Nkhata, Mosimane, Breen, Crafford, and Hay (2011), the concept of benefit-sharing essentially denotes a type of societal dedication to direct some kind of gains, whether monetary or non-monetary, back to specific participants of a project or programme. Practically, benefit-sharing arrangements have been connected to several sectors of natural resources which include water governance and fisheries governance (1890s), forest governance (the 1920s), and water governance (1970s).

The concept was officially formalized in international environmental law and governance by the Convention on Biological Diversity (CBD) in 1992. In the study of transdisciplinary fields of policy, the concept of benefit sharing has frequently been addressed. An example is that current works on ecosystem services have had a major focus on 'Access and Benefit Sharing (ABS)' especially in issues concerning developing countries. It is also indicated that ABS Programmes and the studies around them consider poverty issues and human rights.

In order to have greater clarity of the concept in this study, it is important that an operational description of the term is provided. In having this done Schroeder's (2007) approach of first analyzing the two concepts that make up the term is adopted: benefit and sharing. In this study benefit generally means a gain or an advantage. Therefore, a benefit implies a relative improvement in one's

condition as a result of being made better off. With regards to 'sharing' it is recognized that the production and flow of benefits are outcomes of human endeavors and natural processes, but how these benefits get to the receivers are managed by complex mechanisms of social rules and regulations, ultimately referred to as law. It is the law that governs the rights to, and ownership of, the resources which generate benefits. Thus, for the purpose of this study, benefit sharing is viewed as an interlinked and complex notion of ecological and social processes which come together in a way to reveal the gains allocated to participants of a designed arrangement in the society.

In designing and planning projects, it is imperative to talk about benefit sharing. A clear distinction should be drawn between costs of project, which are the cost of executing and running the project, and benefits of the project, especially resources derived or earned from the project (Asare & Kwakye, 2013). These benefits are to be shared among various stakeholders once all costs of the project have been cleared. Every project planned should have a mechanism for benefit-sharing designed in addition. This particular benefit-sharing mechanism should be regarded by all stakeholders as efficient, fair, and transparent. The likelihood of projects failing increases when their project planners fail to create a benefit-sharing system that is considered equitable and transparent (Agyei, Victor, Rebecca, Winston, Daniel, Juergen, Lawrence, Angela, Mélanie, Ernest, Luca, Winnie, Maria, Boateng, Yaw, & Kwame, 2014).

Direct benefits in REDD+ include employment, carbon-based cash payments, projects for community development, training, access to agricultural

and economic resources (inputs, seed, insurance, credit, nurseries), or access to information resources (extension, training). There are indirect benefits that REDD+ projects could bring and these include institution building, more secured tenure arrangements, development of social capital, as well as several environmental benefits (Agyei et al, 2014).

In ensuring equity in benefit sharing, Peskett and Brodnig (2011), argues that existing land and forest tenure regimes and established policy arrangements for allocating benefits from the forests can serve as the foundation for allocating benefits from reductions in carbon emissions in the absence of clearly defined rights of carbon storage and sequestration. This will guarantee that people with legal rights receive rewards. Again, benefit should also be allocated to indigenous groups, local communities or forest users that have also played roles in forest management. In this case a local community which has unrecognized customary rights in legal terms but strongly protects the forests will also have strong claims to benefits from emission reduction (Luttrell, Loft, Gebara & Kweka 2012).

Moreover, equity in benefit sharing includes when benefits go to those incurring costs. This means that actors take who the burden of transaction, implementation and opportunity cost should be given some compensations irrespective of the carbon emissions reductions they are directly involved in (i.e., sharing of benefits should commensurate with inputs). The usage of inputs to define and measure for benefits sharing is easier and simpler as compared to reduction and their associated opportunity costs. Lastly, Luttrell et al (2012) describes equity in benefit sharing as where benefits are given to effective

facilitators of implementation. These includes, project developers, government agencies and Non-Governmental Organizations.

Effectiveness and efficiency in benefit sharing as argued by Luttrell et al. (2012) is explained as a situation where benefits sharing mechanism is able to make benefit an inducement to bring about changes in behaviour that can lead to an emission reduction and should go directly to the actors in the reduction processes. Coordination and information sharing among stakeholders are important for efficient benefit sharing. These are crucial for determining how to assess and distribute benefits to specified actors. An efficient and effective benefit sharing mechanism leads to low transaction costs due to the fact that there will be proper coordination, no overlaps of functions of ministries and transparent financial monitoring (Moeliono, Gallemore, Santoso, Brockhaus & Di Gregorio, 2012).

REDD+ In Ghana

Ghana's decision to be a part of the international REDD+ programme was initiated through the Forest Carbon Forest Fund (FCPF) in 2008 (Asare, & Kwakye, 2013). The Readiness Preparation Proposal (R-PP) of the country was also approved two years afterwards in 2010. In every country, the R-PP presents and indicates the processes by which the government is to devise a national strategy for implementing the REDD+ programme together with supporting mechanisms and systems for sustainability.

Ghana's R-PP outlines exactly these issues and processes for REDD+ implementation. Ghana also became a beneficiary of the Forest Investment

Programme (FIP) under the Climate Investment Fund (CIF) of the World Bank. The amounts received from this Forest Investment Programme are the supports the Government of Ghana has for pilot projects synchronized with the REDD+ programme of Ghana (Ministry of Lands and Natural Resources, 2012).

Generally, there have been significant debate, learning and actions with regards to the REDD+ programme in Ghana since the engagements began in 2008. Again, there has been enormous support and contribution from stakeholders and other entities including numerous partners from the traditional leaders, civil society, government communities and private sector to realize the goals of REDD+.

According to the Ghana REDD+ Strategy paper (2016), the vision of Ghana for the REDD+ programme is to significantly reduce emissions from deforestation and forest degradation, and ultimately maximize co-benefits of the forests in the country through efforts to address threats that undermine the environmental integrity and ecosystem services. Consequently, REDD+ will be a leading pathway towards sustainable, low emissions development and be a pillar of action for the country's national climate change agenda.

Efforts put in place to participate in and implement the REDD+ programme in Ghana indicate that the country fully supports the mitigation against climate change, forest management and sustainable development (Ministry of Lands and Natural Resources, 2016). The goals of Ghana's REDD+ are to reduce emissions from deforestation and forest degradation significantly, improving the enhancement of carbon stock through forest restoration or

afforestation and sustainable forest management; conserve and preserve forests in Ghana to sustain the services of the ecosystem and also conserve biological diversity; transform the Non-Timber and Forest Products (NTFPs) and major agricultural products of Ghana into climate-smart production systems; expand platforms for public-private and cross-sector collaboration as well as sustainable economic development. Lastly, REDD+ is also established to generate substantial, innovative, sustainable economic and non-economic incentives and benefits to improve the livelihoods of local communities across Ghana.

In order to achieve the vision and Goals of REDD+ in Ghana, the national strategy for implementing REDD+ focuses on five key criteria. The first criterion is environmental sustainability which means ensuring that all activities in REDD+ promotes the sustainable use of forest resources (Marfo, Danso & Nketiah. 2013). The next criterion is economic development which also means ensuring REDD+ activities contribute to the development of the nation. Another criterion for implementing REDD+ in Ghana is inclusivity, indicating that the activities should consider all possible stakeholders and ensure they are all engaged in the processes while ensuring that their rights and possible impacts are considered. Measurable and Marketable forms part of the criteria for implementing REDD+ in Ghana. This indicated that the generation of benefits and revenue through funds, markets and alternative mechanism should be measurable and marketable.

In addition to the criteria outlined concerning REDD+ projects and activities, the National Strategy paper (2016) indicates the principles that guide all aspects of planning and implementation. The principles to guide the pursuance of

REDD+ are that REDD+; should give recognition and respect to the rights of all people including land users and landowners; should be implemented through an inclusive, equitable, transparent, and open process at all levels and at all times; should enhance and maintain Ghana's forest and environment's integrity in order to safeguard ecosystem services; should not promote interests that are external to the programme or 'elite capture' at the expense of communities, people's and national interests and should ultimately align with the country's national development goals.

Challenges to REDD+ Implementation

Recognizing the significance of this programme on a national and international level, Ghana recognises that while the concept of REDD+ is rather simple, the activities necessary to accomplish REDD+ are difficult and multifaceted (Ghana REDD+ Strategy document, 2016). Major obstacles to Ghana's REDD+ process include problems with land and tree ownership, particularly in non-reserve regions, as well as difficulties in developing and implementing an equitable benefit-sharing scheme. Codification of carbon property rights, effective coordination of REDD+-related projects to achieve synergy and cost-efficiency, and a lack of knowledge and expertise in REDD+ issues among important stakeholders, particularly at the grassroots level, are further obstacles.

In Standing and Gachanja's (2014) study on the political economy of REDD+ in Kenya, corruption is identified as a major challenge to implementing REDD+ as well as the concerns on rights of forest dependent communities.

Majority of local community members do not believe in a transparent system to which will ensure a fair and equitable benefit sharing in REDD+.

Ghana Cocoa-Forest REDD+ Programme (GCFRP)

The GCFRP is among the first emission reduction (ER) programmes that depends on the non-carbon benefits that will be given for farmers as a consequence of sizeable private sector investments and has the creation of a sustainable commodity supply chain at its core. This practically means that farmers who are environmentally conscious and agree to implement methods to shade cocoa farms and protect trees should anticipate a considerable rise in farm yields from better access to farming resources and inputs, which will lead to higher incomes (Forestry Commission, 2018).

The initiative is Ghana's first REDD+-related programme to be developed. Its coordination is jointly done by the National REDD+ Secretariat (NRS) of the Forestry Commission (FC) and the Cocoa Board of Ghana (COCOBOD). The COCOBOD is in charge of regulating the production, processing, and marketing of premium cocoa, while the Forestry Commission (FC) is in charge of regulating the utilization of forest and wildlife resources, the management and conservation of those resources, and the coordination of government policies related to them (Nasser et al, 2020). The GCFRP was taken into the Carbon Fund (CF) pipeline in April 2014, accompanied by successful submission of an Emission Reduction Programme Idea Note (ER-PIN). Ghana received approval from the Forest Carbon Partnership Fund (FCPF) participant's committee for its Readiness Package in September 2016. This signaled the end of REDD+ readiness in Ghana

and in June 2017, the Emission Reduction Programme Document (ERPD) of Ghana was presented to the Carbon Fund (CF) leading to the formal invitation of GCFRP into the Carbon Fund Portfolio.

The Ghana Cocoa Forest REDD+ Programme (GCFRP) has projected Emission Reduction (ER) benefits from Carbon payments of \$50 million which will depend on performance over time and an annual investment of \$2 billion into the cocoa industry (Agyei et al, 2014). By offering incentives to farmers, traditional leaders, and communities that support forest governance and management activities that help in lowering deforestation, forest degradation, and the adoption of climate-smart practices, this has the potential to accelerate Ghana's transition to a more sustainable cocoa production landscape. This programme also demonstrates the ability to change institutional business-as-usual practices as it represents the first time the Forestry Commission and the COCOBOD have jointly designed, coordinated and managed a programme of such importance and scale (Takyi, Amponsah, Inkoom & Azunre, 2019)

The programme is located in the southern third of the country and is made up of 5 tropical forest sub-types within the West African Guinean Forest biodiversity hotspot. The programme area covers eight administrative regions, which are the Central Region, Western Region, Western North, Ashanti Region, Eastern Region, Bono Region, Bono East, and the Ahafo. Areas designated for the programme are based on the predominance of the production of cocoa, the presence of major stakeholders, and the area of forests under threat. With regard to the administrative districts, the targeted areas for the programme have been

categorized into "Hotspot Intervention Areas" (HIA) within which there are several communities and farmers controlled by traditional authorities. Accounting for carbon will happen at the programme level.

The ultimate goal of the GCFRP is to significantly cause a reduction in deforestation and forest degradation by encouraging climate-smart cocoa production, strategic policy reforms, law enforcement, landscape-level land-use planning, and risk reduction measures within all prioritized Hotspot Intervention Areas (HIA) (Acheampong, Dawoe, Bosu, & Asante, 2014)

Following the removal of 102,535 million tonnes (t) of carbon dioxide (CO₂) equivalent (e) (tCO₂e) placed in risk and uncertainty buffers, the GCFRP estimates that as a 20-year programme, it could generate a total of 294,395,567 million tonnes (t) of carbon dioxide (CO₂) equivalent (e) (tCO₂e) emission reductions, representing a 44 percent overall reduction against the reference level. Ghana projects that it could significantly reduce deforestation and forest degradation compared to its reference level under a potential agreement with the Carbon Fund to cover the first seven years of implementation (2019, 2024, with the final disbursement in 2025) and produce roughly 10 million tCO₂e emission reductions to be transacted under Emissions Reduction Purchase Agreement (ERPA). However, a benefit-sharing plan (BSP) must be created in advance of the carbon and non-carbon benefits that the GCFRP will produce in order for Ghana to be able to sign an ERPA contract with the CF and proceed to full implementation of the programme and subsequent payment against proven emission reductions.

Land and Tree Tenure System in Ghana

The term "tree tenure" refers to the collection of rights over trees and their products, each of which may be owned by a number of persons or by different people at various points in time (MLNR, 2016). These rights include the freedom to inherit, own, use, dispose of, and prohibit others from using trees and forest products. According to Alhassan (2006), there are three recognized legal land regimes in Ghana, which are statutory, customary and common practice.

However, about 80 percent of the lands are held under customary authorities, therefore a significant role and influence in land ownership and arrangement is played by these authorities. Customary land tenure is mostly controlled by traditional authorities like chiefs or family heads, and are mostly characterized by a largely unwritten nature. Ghana maintains a plural land tenure system, which involves allodial title, leasehold title, freehold title and lesser interest in land (Agyei, 2012). The allodial title is described as being held or vested in traditional skins or stools, clans, families as well as individuals. Allodial owners of land in traditional areas hold their interest and usage under customary law.

A freehold title is an ownership stake that certain people or groups of people have in publicly owned land. According to customary law, freeholders continue to hold as long as the subject and the owner's group recognize the higher title of the stool. In common law freehold interest in land is acquired through an allodial owner's grant, either by gift or sale. This grant demands the parties to come to agreement that their rights and obligations will be regulated by common

law and that disputes that may rise over the usage of the land will be governed by common law (Acheampong, Dawoe, Bosu & Asante, 2014).

In contrast, a person who has a leasehold is allowed to utilize the property for a set period of time. The lease may be given by family, clan, or the stool, who possess the allodial title, when the lessee pays for the use or to occupy the land. To effectively ensure lands ownership and usage are protected there is the need to ensure that tenure systems are secured. According to Boudreaux and Sacks (2009), the right of a group of people and individuals to robust and effective protection by their government or authority against forceful removals is referred to as land tenure security. Land tenure security is an element of property rights. This is described as the right to stay on land owned by an individual and make use of the land or the profit from the land in ways that are deemed as having value by the individual or groups.

According to Acheampong, Dawoe, Bosu and Asante (2014) land or tree tenure is about the relationship between groups of individuals or individuals in which obligations and rights regarding the control and use of natural resources are defined. In developing countries like Ghana, the use and control of land and other natural resources has been an important factor to sustain families and households. When individuals in the local communities do not have secured rights to natural resources, they tend to exhaust the usage of these resources before they are totally lost (Banana & Gomya-Ssembajjwe 1998).

Therefore, to a large extent, tenure determines the willingness of people in local communities to take part in the protection and management of forest

resources. It is strongly argued by scholars that secured land and tree tenure for communities and individuals is a basic requirement for equitable and effective REDD+ (Sunderlin et al. 2014). According to Agyei (2012), the pluralistic nature of Ghana's land tenure regime makes it difficult to identify stakeholders whose rights should be recognized in forest management and therefore leads to marginalization of less powerful stakeholders. Additionally, certain financial incentives are allocated to REDD+ activities that strengthen the land tenure systems in Ghana as uncertain land tenure also contributes to deforestation.

Deforestation in Ghana

Ghana's forest resources are under threat from agricultural encroachment, mining, poaching, and wildfires due to the country's current pace of deforestation and forest degradation (3% yearly loss of forest cover in Ghana) (Ghana REDD+ Datahub, 2021). Ghana's forests have suffered significantly as a result of its economic success and growth. The future of Ghana's forests is a big concern given that the country lost nearly 60% of its forest cover between 1950 and the end of the century (2.7 million hectares), and given that the country currently experiences deforestation at a rate of about 3% per year (135,000 ha/year). Because encroachment and other unlawful activities have seriously threatened Ghana's forest reserves, highly deliberate efforts and steps should be taken to eliminate these challenges (Acheampong, Macgregor, Sloan & Sayer, 2019).

According to the REDD+ National Strategy paper (2016), the Readiness Preparation Proposal (R-PP) of Ghana indicates that the principal factors of deforestation in Ghana are agricultural expansion (50%), wood harvest (35%),

pressures from population and development (10%), and mineral exploitation (5%). Ghana's deforestation is primarily caused by slash-and-burn farming. Large tropical forest tracts have been removed in order to facilitate the expansion of cocoa farming over years, particularly in Ghana's cocoa-growing regions. In Ghana, deforestation has been attributed to cocoa farming both directly and indirectly (UNEP, 2008).

Current benefit sharing arrangements in Ghana's forestry sector

The concept of benefit sharing is explained as the particular forms of responsibility which ensures that returns, either monetary or non-monetary, that are received from the exploitation of natural resources are directed to various stakeholders in the processes and activities (De Jonge, 2011). This is done to recognize the roles, rights and responsibilities of all actors or stakeholders in the exploitation of the natural resources. Through the Convention on Biological Diversity, the concept of sharing the benefits of natural resources was first formally codified in international law in 1992 (Nkhata et al, 2012).

Generally, benefits are in two forms: financial benefits and social benefits or monetary and non-monetary. Social benefits or non-monetary benefits include training, credit facilities, goods, preferential treatments, construction of local infrastructural projects, local hiring practices etc. How benefits are allocated to actors, stakeholders or beneficiaries is usually linked to prevailing conditions: they are either distributed through government institutions or through the establishment of a local community development fund; either according to an already established benefit sharing arrangements or with the consultation of a

particular people (Thuy, Brockhaus, Wong, Tjajadi, Loft, Luttrell & Mvondo, 2013).

According to literature, there should be a critical consideration of issues including the nature of rights held by actors, who should benefit and what are the types of benefits involved (Thuy et al. 2013). Benefit sharing schemes should have general principles to ensure success. These principles are that the scheme should be efficient, effective and equitable. According to the Ministry of Lands and Natural Resources (2016), arrangements for benefit sharing largely sidelines tenant farmers and sometimes local traditional authorities. Therefore, any benefit sharing arrangements that does not take into consideration how benefits generated from natural resources exploitation reaches tenant farmers, local chiefs and community members will not achieve the impact desired. This supports the argument that equity and fairness in benefit sharing and land tenure arrangements between different groups is important and crucial.

Categories of Tree Management Schemes in Ghana

Tree tenure and benefit sharing arrangements in Ghana are categorized into four according to the Ministry of Lands and Natural Resources (2016). These are Off-forest Reserves, Forest Reserve, Naturally Occurring Trees and Planted Trees. This categorization is based on whether the trees are within a formally designated forest reserve or not and whether the trees are naturally occurring or planted. Forest reserves are wholly vested in the state, and therefore entry is restricted and requires permissions for exploitation, timber rights, and NTFPs. In Off-reserve Forests, the rights to own economic timber trees are also in the hands

of the government. Access to trees and NTFPs, however, is reliant on the current land ownership and inheritance structures. In Ghana, the legal frameworks governing rights for planted trees and those that naturally grow in non-reserved areas follow different principles (MLNR, 2016). Regulations, both statutory and customary on planted trees in off-reserve areas considerably gives rights, such as access, benefits and control rights to actors who planted the trees. Although owners of lands have full rights to control, access and benefits to the land, naturally grown tree rights are vested in the state.

Benefit Sharing Arrangements on Natural Forests

Currently, the general allocations for the sharing of benefits or revenue accruing from timber exploitation in Ghana are as shown in Table 1;

Table 1: Forest Reserves and off-reserve Revenue allocation among Stakeholders

Stakeholders	Forest Reserves (%)	Off-Reserve (%)
Forestry Commission	50	50
Administrator of Stool Lands	5	5
District Assemblies	24.75	24.75
Stool Chief (Alienation Holder)	11.25	11.25
Traditional Council	9	9
TOTAL	100	100

Source: MLNR (2016)

Specifically, there are rents, fees, and benefits that accrue from forest exploitation which includes contract area rent, timber right fee, Social Responsibility Agreements and Stumpage fee. These benefits are explained below;

Contract Area Rent

Contract Area Rent is explained as the yearly payment per hectare to the Office of the Administrator of Stool Lands (OASL) when the lands to be exploited are regarded as stool or skin lands. In cases where the lands are not stool lands, the payments are made to the owners of the land. Documents on this benefit indicate that they are to be collected by the OASL but in practice, the contact area rent is collected by the Forestry commission (MLNR, 2016). In the case of stool or skin lands, the OASL deducts 10 percent as administrative fee before the benefit is shared amongst the beneficiaries.

According to Mensah Mawutor and Young (2017) Ghana's constitution informs that profit should be split as follows: 25 percent to the Stool through the Traditional Authority specifically for maintaining the Stool, 55 percent to the District Assembly and 20 percent to the Traditional Authority. Realizations from this arrangements of sharing benefit indicates that majority of the benefits are allocated to the government through the district assembly and the Administrator of Stool Lands' office.

Stumpage Fee

The stumpage fee is a fee charged based on volume of species-specific harvested timber. This is used to represent the royalties which supports landowners by providing basic returns and helps in the regulation of timber and

the management of forest (MLNR, 2016). In forest management, there should be measurement and calculation of stumpage fees when the contractor, District Forest Officer and the landowner are present before timber is lifted from its stump. The money is taken by the Forestry Commission. However, the Constitution mandates the OASL to take revenues from forest exploitation on stool lands, therefore the final decision and responsibility for the stumpage fee collection rests with the OASL.

The Tree Tenure and Benefit sharing framework in Ghana (2016) indicates the sharing of stumpage fees is just like contract area rent, therefore if it is about Stool or Skin lands the OASL does the distribution as stated in the constitution after retaining 10 percent administrative fee. Fifty percent of the collected stumpage fees are withheld by the Forestry Commission and the remaining 50 percent is reconsidered as 100 percent for distribution. In that distribution, 25 percent is allocated to the Stool for maintenance through the authorities of Traditional Council, 20 percent allocated to the Traditional Authorities and 55 percent allocated to the District Assembly (Mensah Mawutor & Young, 2017).

This arrangement indicates that a majority of the revenues are allocated to the government authorities. This is not equitable in its purest form. Hoare and Uehara (2022) also reveals that in sharing revenues from stumpage fees, half of the total is kept by the Forestry Commission and the other half is redistributed among traditional authorities and local authorities.

Social Responsibility Agreements

The Social Responsibility Agreement (SRA) is usually referred to as an undertaken or agreement signed between local communities and companies engaging in the exploitation/extraction of natural resources within the communities (Ayine, 2008). Mainly, SRAs help communities to demand firms, organisation, and government agencies to allocate part of their revenues from exploitation to social amenities for the community such as potable water, street lightings, schools and others (MLNR, 2016). A study by the International Institute for Environment and Development on the implementation of SRAs with commercial logging companies in Ghana indicates that SRAs are innovative tools that help to progress community rights to the sharing of benefits emerging from resources exploitation.

In Ghana's forestry sector, commercial timber harvesting is the main activity that ensures or promotes SRAs as indicated under the Timber Resources Management Act (547) which makes provision for ensuring direct benefits to communities fringing the timber harvesting areas (Forestry Commission, 2016). When timber operators enter contractual agreements called Timber Utilization Contract (TUC) with the government, they are obliged to sign SRAs before permits are issued. This ensures that forest dependent communities are compensated for the exploits of natural resources around their communities.

The processes to granting TUC are stated in the Timber Resources Management Regulation (LI 1649) of 1998 and amendment Act 617 of 2002 and this informs who the beneficiaries of SRAs should be. These are communities

within 5km around the reserve where the operations take place and communities within the operational area off reserve (Forestry Commission, 2016). SRAs in Ghana' forestry sector has two components and these are Code of Conduct and Social Obligation. According to Agyei and Adjei (2017), Stakeholders of SRAs do not mostly consider the priorities of the local people when there are representations from the local authorities.

Timber Rights Fee

In forest and Timber management, timber rights are given to bidders who offer the highest yearly fee for timber rights. Logging companies who are given these rights can go ahead to exploit after they have made all due payments. The Timber Rights Fee is referred to as a lump-sum paid annually for total concession paid by the logging company (MLNR, 2016). When the first timber right fee is not paid, the grant of the timber right has to be nullified by the Minister in charge and should be terminated if the subsequent payments are not made.

Ghana's Timber Resource Management Acts and Regulation do not give an indication on how proceeds from the timber rights fee should be distributed. Over the years, the proceeds have been transferred into the Government's Consolidated Fund. This practice has not been the best because stakeholders who are supposed to benefit from these proceeds are left out of its usage. This has led to some proposals to share the revenue between land and forest owners, afforestation programme and the Consolidated Fund. The Forestry Commission is permitted to receive no more than one third of the total receipts from the forest

reserves with the intention of spending it on activities that would improve the forest in the owners' best interests. (MLNR, 2016).

In conclusion, Ghana's forestry sector benefit sharing schemes make allocation for all stakeholders involved in the forest activities that brings about benefits to share. It is realized that majority of the benefits to be shared are mostly allocated to government agencies or organizations.

Conceptual Framework

A study of benefit-sharing and the rights of forest dependent communities under the Reducing Emission from Deforestation and Forest Degradation (REDD+) programme requires an appropriate conceptual framework that will form the basis for the study, capturing issues from the problem statement through methodology to results and recommendation. According to Shikalepo (2020), the conceptual framework creates a synergy among the variables forming the basis of the study, amongst these include the concept of land and tree tenure, rights, equity, effectiveness, efficiency and benefit sharing.

The nature of land and tree tenure in a country, proper allocation and explanation of carbon rights as well as the protection of rights are issues that ensure the successful implementation of REDD+ (Minang, & Noordwijk, 2014). From Fig. 1 below, REDD+ implementation has land and tree tenure, recognition of rights, and a conscious effort to protect these rights as key aspects of the programme. Implementers of REDD+ ensure that there are appropriate and secured land and tree tenures since insecure tenure poses a serious threat to the implementing REDD+ successfully.

The issue of rights also plays a key role. This is because rights of forest dependent communities need to be protected in REDD+ since these local land users contribute a lot to having a successful programme implementation. The framework also shows how these core issues (land and tree tenure, recognition of rights and protection of rights) are related to benefit sharing. Land and forest ownership makes up the issues of land and tree tenure and participation informs the recognition of rights of local communities. The protection of rights in this study are explain with the right to access and the right to use forest and forest products.

When the core issues in REDD+ are upheld, the implementation of REDD+ leads to equitable benefit sharing. Benefit sharing plays a key role in the successful implementation of REDD+ which means success in emission reduction. This is because stakeholders involved in the fight against climate change expect either direct benefits or indirect benefits, and if benefits are kept away, local communities do not support subsequent projects under the REDD+ programme, thereby leading to a failure of the implementation of REDD+.

Equity, Efficiency and Effectiveness, the 3Es, are the fundamentals of an appropriate mechanism for sharing of benefits. Any REDD+ programme or project with the 3Es in benefit-sharing as part of the benefit-sharing mechanism of the programme has a higher possibility of being successful (Sherpa & Brower, 2015). The framework shows that if REDD+ programmes and projects are implemented with appropriate or equitable benefit sharing, there is a higher

possibility of having the programme or project implemented successfully which means successful emission reduction and full participation of all stakeholders.

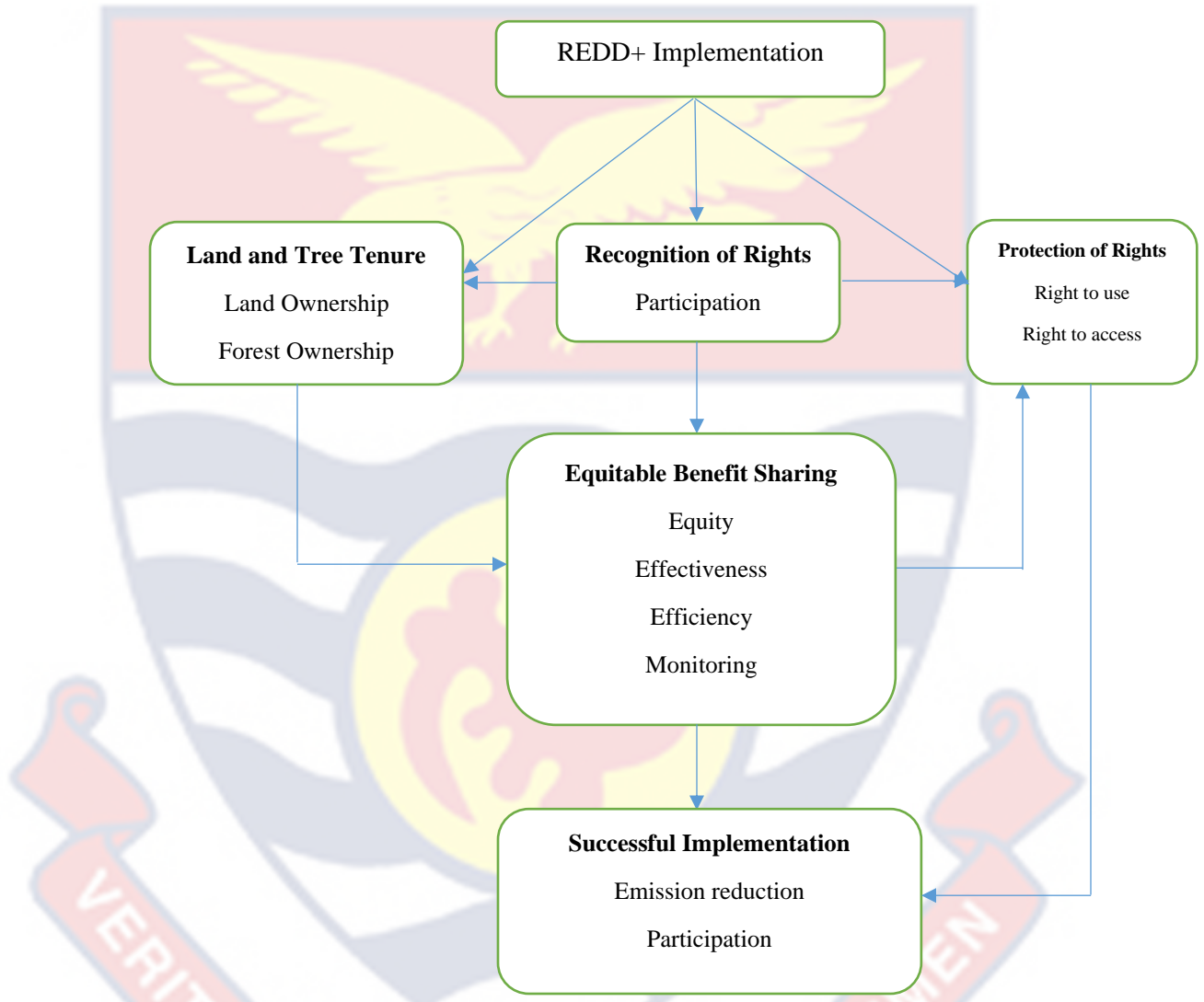


Figure 1: Conceptual Framework for REDD+ Implementation and Benefit-Sharing.

Source: Author’s Construct (2021).

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter introduces and discusses the wider philosophical and theoretical implications of the study methodology specifically discussing the nature and strategy adopted by the study to gather and analyze the data. It presents the profile of the study area, research design and source of data. It also discusses the population of the study, sampling techniques, data collection techniques with corresponding instruments, data processing and analysis.

Research Design

The study adopted the qualitative approach in research as the design which has its philosophical paradigm as interpretivism. The interpretivist approach is founded on the notion that approaches used to comprehend knowledge in the human and social sciences cannot be precisely the same as those used in the physical sciences since humans subjectively define their environment and base their actions on this interpretation (Hammersley, 2013).

Therefore, the interpretivist approach requires an adaptation of a relativist ontology where a single phenomenon may have multiple interpretations instead of one truth which can be identified by a particular process of enquiry or measurement. In employing the interpretivist perspective, the goal is to comprehend the phenomenon being examined more thoroughly, taking into account its complexity and specific setting, as opposed to making generalizations from a population (Creswell, 2007).

This qualitative approach in research is done by collecting, processing and analyzing qualitative data in a particular study (Creswell, 2007). The qualitative approach in research as implied by Creswell (2003) is where knowledge claims and research are based on interpretations employing qualitative or interpretivist methods and approaches to gain understanding and knowledge into a particular investigated issue. The objectives of the study formed the basis for which the approach to collecting and analyzing data is employed.

Thus, the rationale for using qualitative approach to research is in agreement with the general aim of the study, which is to explore the political economy of REDD+ implementation in Ghana with a focus on the rights of forest dependent communities and the sharing of benefits. In summary, the qualitative research design was used because the collected data in the study tends to lend itself to the qualitative approach.

Study Design

In order to access enough information to respond to the objectives of the research, the study adopted the exploratory study design. Exploratory study design as described by Creswell (2007) is a research design employed to investigate a problem which is not clearly defined. It is also conducted to help a researcher have a better and deeper understanding of the existing problem. This design is appropriate for exploring a phenomenon since it begins and ends qualitatively (Creswell, Plano Clark, et al., 2003). The exploratory design is better suitable to test components of a developing theory or classifications, or to

extensively investigate a phenomenon before measuring its prevalence. (Morgan, 1998).

The study was exploratory because of the theoretical gap on the issue of benefit sharing. The exploratory study was appropriate because it allowed for close observation of forest activities, review of documents for data enrichment and interviews with people who have enough information for the study as argued by Creswell (2007). The design is appropriate for the study since it allows for possible exploration of stakeholder situations and forest governance in their natural environments. The design made it possible to collect data from many sources using various methods, such as focus group discussions and in-depth oral interviews. The strategy allowed for a thorough analysis, which enabled the researcher to gather detailed information regarding how the implementation of REDD+ in Ghana has impacted the rights of people that depend on forests as well as its benefits sharing.

Study Area

The study area is the Kakum Hotspot Intervention Area (HIA) with the communities within and around this area. The Kakum Hotspot Intervention Area is a wildlife area which is protected and located in the Central Region of Ghana. From Cape Coast, which is the regional capital, the area is approximately 35km away. It covers 360km and consists of Kakum National Park. The Conservation area falls within the Assin South District of the Central Region of Ghana ($1^{\circ}30'/-1^{\circ}51'//W$; $5^{\circ}20'/-5^{\circ}40' N$). The communities close to the protected area are primarily engaged in commercial and subsistence farming. One of Ghana's cocoa-

growing regions is the Kakum Conservation Area, which is comprised of the Kakum National Park and the Assin Attandanso Reserve (Marfo, 2008).

A mixture of cocoa fields and forest reserves dominate the landscape of the Assin South district. The existence of numerous REDD+ projects in the district and the presence of Climate-Smart Cocoa (CSC) interventions was a major factor in the selection of the research area. Efforts in the Assin South district have been more of Community Resource Management Area Mechanisms (CREMAs). The Ghanaian NGO, Nature Conservation Research Centre (NCRC) with other companies like Mondelez and Touton have run sustainability interventions for several years in this district and these mostly involve elements of Climate Smart Cocoa Farming.

The diversity of intervention programmes and CSC in REDD+ provided the opportunity to explore the current state of REDD+ benefit sharing in the area. Five communities in the HIA were selected for the study. These communities were Assin Bontuku, Assin Ampenkro, Assin Bosomadwe, Assin Kumasi and Assin Kuruwa. Figure 2 shows a map of the Kakum Hotspot Intervention Area.

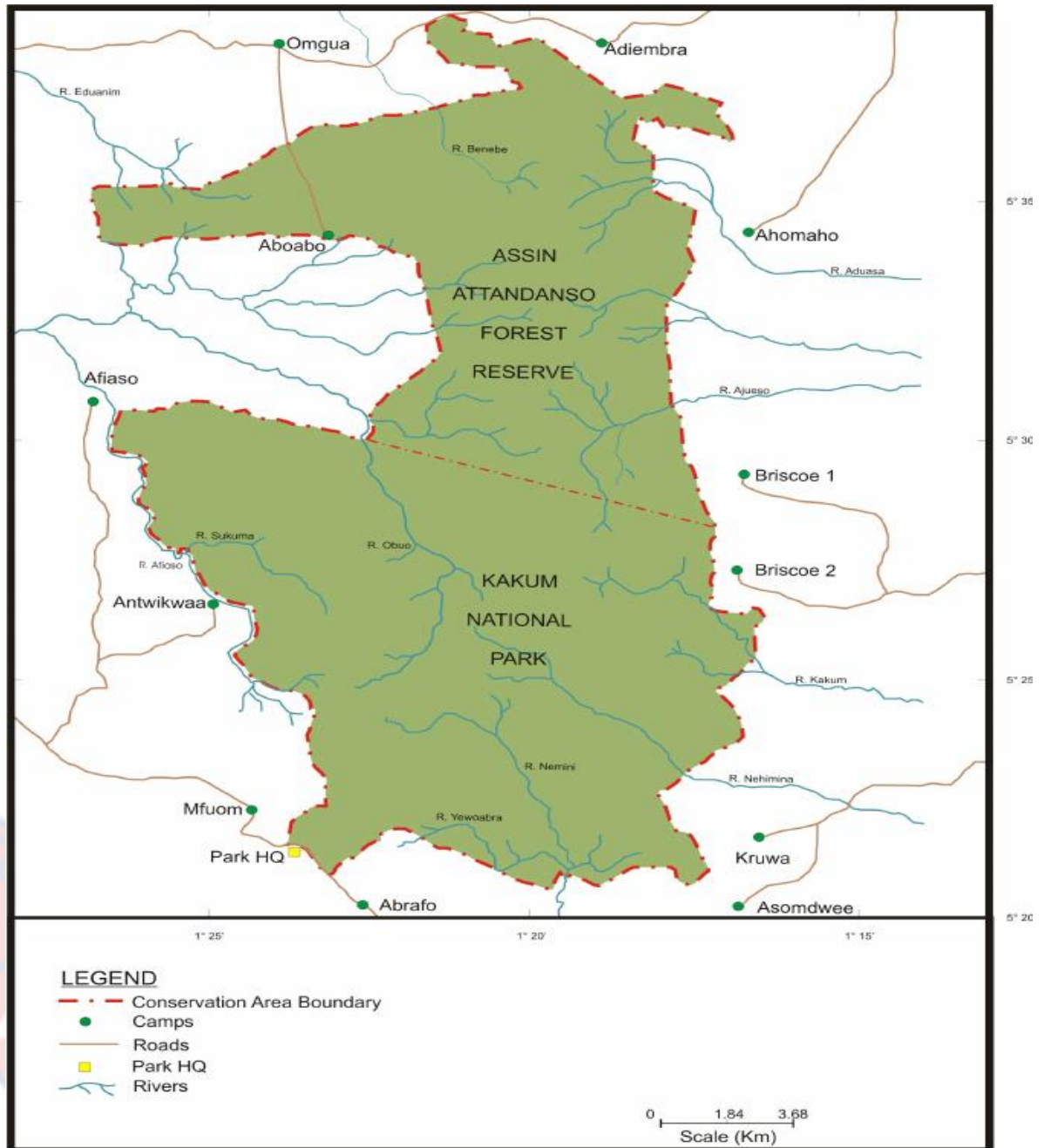


Figure 2: The map of Kakum conservation area showing the major communities

Source: Monney, Dakwa, & Wiafe (2010).

Population

The study targeted traditional authorities, local government, Forestry Commission, farmers and the general people living within and around the Kakum Hotspot Intervention Area (HIA). The area has both chieftaincy institutions and District Assemblies. The part of the target population that was studied in this research is known as the survey population (Sarantakos, 2005). This involved the selection of community members, farmers and traditional authorities from the selected communities within the HIA. With reference to the topic, the researcher became more interested in the farmers involved in REDD+ projects in the area and officials of Ghana's Forestry Commission in the district.

Sampling procedure

The purposive and convenient sampling technique was used to select 74 participants which were made up of farmers, traditional authorities and leadership of local government system and same was employed to select respondents from the Forestry Commission. Five communities (Assin Bontuku, Assin Ampenkro, Assin Bosomadwe, Assin Kumasi and Assin Kuruwa) which are close to the conservation areas were targeted for the study. The sample size was not determined *a priori* but rather evolved during the field work. To this effect the concept of saturation was employed. Interviews were conducted until such a point where no new emerging issues were identified from the collected data.

The government officials, traditional authorities and other forest users were purposively sampled for in depth interviews and the convenient sampling technique was used to sample forty Climate Smart Cocoa (CSC) farmers. These

climate smart cocoa farmers were selected through the help of Forestry Commission officials and CREMA executives within the HIA. Eight CSC farmers were selected from each of the five communities included in the study.

Data Collection Instruments

A data collection method is described as how a researcher gathers or obtains data for a study and an instrument for research is a tool used to collect data (Fielmua & Boye Bandie, 2012). The instruments employed by the researcher included interview guide and focus group discussion guide. Questions on these guides remain same for all respondents but were possible to change when there were needs to probe for further information. The Interview guide for authorities at the Forestry Commission and the District Assembly had Twenty-Three (23) items divided into three sections (A, B and C). Section A, which items 1 – 9 identified the factors that affect the equitable flow of benefits sharing in REDD+. Section B (10 – 14) of the instrument measured the impact of REDD+ implementation on access, ownership and use of forest and Section C (15 – 23) investigated the state of REDD+ benefit sharing in the Kakum HIA.

The Focus Group Discussion guide employed contained Sixteen (16) items divided into Three (3) sections (A, B and C). Section A with items (1- 4) identified the factors that affect equitable flow and sharing of REDD+ benefits. Section B with items (5 -8) also explored the impact of REDD+ implementation on access, ownership and use of forest and Section C with items (9 – 16) also investigated the state of REDD+ benefits sharing. The guide for general members of the community also had Seventeen items (17) divided into section (A, B and

C). the first section also identified factors that affect the equitable flow of benefits in REDD+, the second section investigated the impact of REDD+ implementation on Access, Ownership and Use of forest and the final section investigated into the state of benefits sharing in REDD+.

Validity and Reliability

Validity and reliability are defined as trustworthiness, quality and rigor in the qualitative paradigm. To ensure validity and reliability the researcher must ensure that bias is reduced and raise the veracity of a claim regarding the phenomenon being studied by assuring the research's credibility, transferability, trustworthiness, conformability and dependability (Krefting, 1991). Lincoln and Guba (2000), designed a qualitative research equivalents of external validity as transferability, internal validity as credibility, reliability as dependability and objectivity to ensure the conclusions of the study were trustworthy, referred to as confirmability. The concerns of validity and reliability of the study were addressed in terms of transferability credibility, confirmability and dependability.

Transferability explains whether the findings of a study are applicable outside of the study's subject and context (Cobbold, 2015). Researchers employing qualitative approach are more concerned with the question of where the study will be applicable to another context rather than the question of whether their findings are just generalized (Cobbold, 2015). To ensure this, I gave a detailed account of the study context and how respondents were selected. This will help anyone transferring my study or making inferences to make judgment of any aspect of the results. Credibility represents the degree of concordance

between the actual viewpoints of the respondents and how the researcher has portrayed them. This was achieved through triangulation (Reeves, Kuper, & Hodges, 2008) as it helped to reduce bias on the part of the researcher. This was done through participant's response triangulation, as the interview and discussion responses came from different participants which helped the verification of findings and avoidance of bias (Roper & Shapira, 2000).

Dependability of a study refers to whether the results of a study will be consistent and replicable if the study is repeated in the same setting with the same participants (Neuman, 2007). Dependability was achieved by meticulously providing all processes regarding the research, this covers the data gathering tool, data collection process, coding, and data analysis process to enable a trustworthy audit of the research process. Confirmability according to Tobin and Begley (2004) is showing that answers and interpretations of findings are not just conjectures by the researcher., but can be verified from where the data was collected. In this study, confirmability was achieved through the triangulation of interviews from participants, as majority of the statements in the analysis were stated verbatim in the analysis to reflect the views and perceptions of participants exactly as they stated.

Data Collection Procedures

A data collection procedure is described as how a researcher gathers or obtains data for a study and a research instrument is a tool used to collect data (Fielmua & Boye Bandie, 2012). The methods and instruments employed by the

researcher were interview with key informants and focus group discussion with climate smart cocoa farmers.

Ethical clearance was taken from the Institutional Review Board (IRB) of the University which was followed by an introductory letter from the Department of Integrated Development Studies before the data collection began. All the data collection took place within the Kakum Hotspot Intervention Area with In-Depth Interviews (IDIs) and Focus Group Discussion (FDGs) being the main methods for data collection. Each interview had a duration of twenty (20) to forty-five (45) minutes while the Focus Group Discussion had a duration of approximately 60 minutes. In all, the study envisaged to include a minimum of Seven-four (74) participants for both FDGs and IDIs.

According to Obeng-Odoom (2009), interview as a method of data collection in research is whereby the researcher contacts the respondents and interacts by asking particular questions to obtain answers to his research problem. In this study, interview guides were used as the instruments for collecting data through In-Depth Interviews (IDIs). The interview guide contained questions that were open ended as Walford (2007) indicates that people are more likely to give out more information in a one-on-one discussion as compared to an open public forum. The IDIs were conducted with representatives of the District Assembly, the Forestry Commission, traditional authorities and some farmers who were into climate smart cocoa practices. However, during the field work it was found necessary for some significant others to be interviewed, this included hunters, timber operators and herbalists. In conducting the interviews, I first introduced

myself to them, ensured the consent of these participants were sought for and arranged for a day and time within my data collection period. Venues for the interviews were at the offices of the District Assembly officers and Authorities at the Forestry Commission.

Focus group discussion (FGD) was the main method used to solicit data or information from Climate Smart Cocoa (CSC) famers (both men and women) and the general community members. According to Dugle, Akanbang and Salakpi (2015), Focus Group Discussion is an interaction or a discussion between one or more researchers and two or more participants purposely for the collection of data. During the field work, five Focus Group Discussions; one in each of the five selected communities and made up of eight participants. This ensured that the possible dynamics of the issues will be adequately covered. The FGDs were constituted through the Forestry Commission officials and CREMA executives in the HIA. These officials helped in locating and selecting farmers involved in climate smart cocoa practices.

Before starting the collection of data, I initially sought the consent of participants and made arrangements for a day, time and venue of their choice within my data collection period. In conducting the FGDs, I read out the questions to the participants and asked for their responses while recording with a recording tape. Local languages (Fante and Twi) were used to explain question to respondents when the need be for better understanding of the research.

Data Processing and Analysis

The data was processed and analyzed using qualitative data analysis techniques. Qualitative data from interviews and focus group discussion recorded on audio tapes were transcribed, coded and organised according to the categories of interviews and discussion topics. Data analysis in this study was conducted using a stakeholder analysis and a thematic analysis. The primary data was analyzed using the thematic analyses in qualitative research. Identification, analysis, and interpretation of themes or patterns of meaning within qualitative data are described as thematic analysis (Nowell, Morris, White, and Moules, 2017). The stakeholder analysis was conducted using the Power/Interest Grid. Power and Interest or Participation levels of stakeholders were determined using the statements from these stakeholders and supported by the National REDD+ strategy paper.

Braun and Clarke (2012) have described it as a technique for methodically locating, compiling, and offering insight into meaning patterns known as themes across a set of data. The researcher can recognise and make sense of shared or collective experiences and implications through thematic analysis. In the analysis, there could be numerous patterns in across a particular set of data but it is important to identify the relevant ones which answers a particular research question.

Thematic analysis is a flexible technique that enables the researcher to either investigate latent meanings, the concepts and presumptions that underlie what is clearly stated, or describe the apparent or semantic meanings in the data

collected (Braun & Clarke, 2006). Thematic analysis is preferred due to its accessibility and flexibility. This approach provides a pathway into the study of qualitative data, teaches the mechanics of methodically coding and analyzing qualitative data, and connects qualitative data to more general theoretical and conceptual difficulties. Before conducting the thematic analysis for the study, a stakeholder analysis was conducted to determine and ascertain the stakeholders involved in the programme, level of participation and influence, and which stakeholders to prioritize.

According to Braun and Clarke (2006), thematic analysis has phases and these are presented on how I went through the analysis stage. In the first place, I familiarized with the data by listening to the audio recordings of interviews and discussions several times (Gay, Mills and Airasian, 2009). Each of the respondents were given a pseudonym for easy identification (Sommers and Sommers, 2002). Farmers interviewed were given codes as (Farmer 1 - 10), Traditional Authorities were also given codes as (Traditional Authority A1 – Traditional Authority E2) with their communities given codes and alphabets (Assin Ampenkro – A, Assin Bosomdwe – B, Assin Bontuku - C, Assin Kumasi – D and Assin Kumasi – E). Government officials and other participants were also given references with their occupation or designation. Verbatim transcriptions of the recordings were done to ensure that no information was misinterpreted or lost. Afterwards, I then used the Nvivo 11 Plus software to generate codes through phrases in the content of the interviews. These codes were used to search for and create potential themes. These themes were searched for and created with the objectives of the study in mind and reviewed. Themes and sub-themes that could

not be discussed were collapsed. Finally, the themes to be discussed were defined and given names with the report for the study produced afterwards.

As part of the data analysis stage, results were interpreted and meanings were made out of the data collected. This involved explaining the results achieved, attaching significance to particular results, situating findings in literature and ensuring a pattern into the conceptual framework (Sarantakos, 2005).

Ethical Issues

In research decisions, ethical considerations play a key role and form an essential part (Bulmer, 2001). Ethics are defined as the standards of behavior that set apart acceptable from bad behavior. Babbie and Mouton (2006) claim that in order to uphold ethical norms, researchers must be mindful of potential risks and harms and take steps to protect participants. A qualitative study's credibility is determined by how carefully the researcher ensures that ethical guidelines are followed and whether the study complies with these guidelines (Rossman & Rallis, 2011). As a result, the study was carried out in accordance with and in compliance with all ethical standards for research. An ethical clearance was obtained from the Institutional Review Board of the University of Cape Coast.

An introductory letter from the Dean of the School for Development Studies was first submitted to assure respondents that the research was purely for academic purposes. I went further to obtain approval from the Headquarters of Forestry Commission. Informed consent of all participant and respondents was also sought for before the administration of the instruments commenced. Moreover, the participants were assured of confidentiality and anonymity (Sommers and Sommers, 2002).

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter of the study presents the results of the study and discussion of the findings. This study explored the political economy of the implementation of REDD+, specifically the sharing of benefits and the impact on rights of forest dependent communities in the Kakum Hotspot Intervention Area (HIA). A stakeholder analysis was conducted to ascertain which stakeholders to prioritize and engage.

Analysis of Primary Data

Data from Interviews and Focus Group Discussions (FDGs) were collected from farmers involved in the REDD+ programme, traditional authorities and government officials from Ghana's Forestry Commission and the Assin South District Assembly in the Kakum HIA. The collected data were based on the research questions of the study and were grouped under the following themes for analyses;

1. Factors that affect the flow of REDD+ benefit sharing in the Kakum HIA.
2. Effects of REDD+ projects on access, use and ownership rights of forests by local communities in the Kakum HIA.
3. Addressing the 3E's of Benefit sharing mechanisms in REDD+ benefit sharing in the Kakum HIA

Demographic Information of Respondents

According to Grix (2004), understanding the socio-demographic characteristics of a given population is necessary to understand the dynamics of that population. Participants' demographic information in this study includes, sex, age, occupation and educational background. These were necessary as they will help to know how long the participants have had lived experiences in the landscape and how well they would understand the operations of the REDD+ programme and its activities. Since the REDD+ programme in the Kakum HIA has farmers as the key stakeholders, it is important to indicate the occupation of participants in the study. From the data on demographics of the respondents as presented in Tables 1 to 4, data was collected from seventy-four participants. The group of respondents engaged in the study were generally community members, traditional authorities and government officials in charge of implementing the REDD+ programme in the Kakum HIA. Table 2 shows the communities engaged with their respective respondents.

Table 2: Communities Engaged

Community	Comm. Members	Traditional Authority	Government Officials	Frequency	Percentage (%)
Assin Kuruwa	14	2	0	16	22.54
Assin Ampenkro	13	2	0	15	21.12
Assin Bontuku	13	2	0	15	21.12
Assin Bosomadwe	11	2	0	13	18.31
Assin Kumasi	10	2	0	12	16.90
Total	61	10	0	71	100.00

Source: Field data, (2022)

From the data on communities engaged as presented in Table 2, there were sixty-one members of the communities and ten traditional authorities. Out of the sixty-one general members of the selected communities who are people with different occupations, fourteen were from Assin Kuruwa, thirteen each from Assin Ampenkro and Bontuku, ten participants from Assin Kumasi and eleven participants from Bosomadwe. Comparatively, Assin Kuruwa, Assin Bontuku and Assin Ampenkro are closer to the national park or the main forest protection areas than Assin Kumasi and Bosomadwe. Also, out of the ten traditional authorities interviewed, there were two each from all the five communities engaged.

People from Assin Ampenkro, Assin Kuruwa and Assin Bontuku communities are greatly affected by government actions regarding the forests and the implementation of REDD+ since they mostly depend on the forest for their survival and therefore it is reasonable to have more participants from these communities. In addition, three government officials who were in charge of the implementation of REDD+ in the Kakum HIA were also engaged. In terms of sex, 50 participants were males, representing 67.57 percent.

Table 3: Age of Respondents

Age	Comm. Members	Traditional Authority	Government Officials	Frequency	Percentage (%)
26-30	11	-	-	11	14.86
31- 35	7	-	2	9	12.16
36-40	9	-	1	10	13.51
41-45	9	1	-	10	13.51
46-50	11	3	-	14	18.92
51-55	11	3	-	14	18.92
56-60	3	2	-	5	6.76
61-65	-	1	-	1	1.35
Total	61	10	3	74	100.00

Source: Field data, (2022)

The data on age distribution shows that majority of the participants fall within the age category of 46 – 50 and 51 – 55. This reveals that majority of the participants have had comparatively long lived experiences in the communities before and after government plans and actions to conserve the forests. Such experiences helped in gathering rich data for the purpose of this study.

Table 4: Educational Background of Respondents

Education Background	Comm. Members	Traditional Authority	Government Officials	Frequency	Percentage (%)
None	2	-	-	-	2.70
Primary	9	3	-	12	16.22
JHS	22	5	-	27	36.49
SHS	24	2	-	26	35.14
Tertiary	4	-	3	7	9.45
Total	61	10	3	74	100.00

Source: Field data, (2022)

The data in Table 4 reveals that majority of the respondents have had high school education. This is appropriate for the study as participants with a good level of education will better understand and appreciate climate change issues and the activities in the REDD+ programme.

Table 5: Occupation of Respondents

Occupation	Comm. Members	Traditional Authority	Government Officials	Frequency	Percentage (%)
Farmers	50	10	-	60	81.08
Public Servant	-	-	3	3	4.05
Herbalist	2	-	-	2	2.70
Hunter	2	-	-	2	2.70
Timber Opr.	2	-	-	2	2.70
Teacher	2	-	-	2	2.70
Food Vendor	2	-	-	2	2.70
Labourer	1	-	-	1	1.35
Total	61	10	3	74	100.00

Source: Field data, (2022)

Table 5 shows that participants of the study which is made up of community members, traditional authorities and government officials were majorly dominated by farmers. This is appropriate as we have farmers as the key stakeholders and at the core of the implementation of REDD+ and its projects in the Kakum HIA as well as the study.

Stakeholder Analysis on REDD+ Implementation in the Kakum HIA

Before conducting a complete analysis of primary data collected for the study, a stakeholder analysis on the implementation of REDD+ was conducted. This was done for a better understanding of the situation, claims and effects of the forest preservation and the benefits associated with various stakeholders. Primarily, the stakeholder analysis was conducted to determine which people were involved in the programme and to ascertain the level of interest, participation and influence by stakeholders in the Kakum HIA.

The stakeholders considered with regards to the implementation of REDD+ within the HIA include traditional authorities, farmers, hunters, timber operators, herbalists, forestry commission, district assembly, non-governmental organisation (NGOs), other community members (traders and teachers). The analysis was conducted using the Power-Interest Grid. Stakeholder structuration with the pillars of stakeholder analysis which are power and influence, legitimacy, proximity and urgency were used to prioritize stakeholders and measure levels of participation, interests and influence. This was supported with consistencies in the statements from stakeholders. On legitimacy, stakeholders with conferred legitimacy through participation and those who work for societal good have high interest and level of participation. Stakeholders with power from laws and policies establishing and governing the program have high interest, participation and influence in the implementation. Table 6 indicates various stakeholders with their interest, influence, level of participation, stakeholder claims and motivation for REDD+ implementation. The stakeholders are arranged in order of importance to the implementation of the programme.

Table 6: Stakeholder Analysis on REDD+ Implementation

Stakeholders	Interest	Power/ Influence	Participation level	Claims	Motivation for REDD+
Forestry Commission	High	High	High	A strong need to preserve the forests.	Combating climate change
Traditional Authority	High	Medium	High	Forest protection would affect livelihoods of community members.	Natural resource protection.
District Assembly	Medium	High	Medium	A strong need for forest protection to fight climate change.	Combating Climate change
Farmers	High	Medium	High	The programme will put strict limitations on agricultural activities.	Benefits to be received.
NGOs	Medium	Medium	Medium	A strong need for forest protection to fight climate change.	Research and Combating Climate Change
Timber Operators	High	Low	Low	Livelihoods affected due to lack of easy access to the forests.	No motivation

Continuation of Table 6

Hunters	High	Low	Low	Livelihoods affected due to lack of easy access to the forests.	No Motivation
Herbalist	Medium	Low	Low	Livelihoods affected due to lack of easy access to the forests.	No Motivation
Traders	Low	Low	Low	Indifference to the implementation of the REDD+.	No Motivation

Source: Author's Construct (2022)

From Table 6, the Forestry Commission being the major implementer of the REDD+ programme is considered as part of the most important stakeholders in the project. They have higher power and of higher interest in the whole programme. The Forestry Commission coordinates the affairs of the REDD+ programme and activities in the HIA while collaborating with other stakeholders including the district assembly, community members and NGOs in execution of duties. Due to this, a major part of the success or failure of the forest protection and climate actions depends on the Forestry Commission. Farmers in the landscape are also considered very critical to the success or failure of REDD+ implementation.

It was realized that the programme was of high interest to farmers but their level of influence was on a medium level. This is because farmers were expected to refrain from clearing lands for farming but to maintain their land sizes and

increase farm yields through training from the Forestry Commission and Agricultural Extension Officers.

A forestry commission official stated that;

From the NCRC's research, it is realized that it is the increase of farmlands for the production of cocoa that is causing the degradation. Therefore, if the farmers are farmers are able to increase their yields per land area used for the farming, then there will be no need to increase the land size. So now we helping the farmers to increase their yields per acre of land so that they will not increase the farmlands. The farmers have a perception that if the land size is increased the yield also increases not knowing the yield can be increased on the same land (Government Official, January2022)."

According to the officers, the willingness to increase yields leads to the clearing of lands for farming but farmers have been trained on how to increase yields on the lands already cleared. This confirms findings of Acheampong et al (2019) where it is revealed that forest reserves in Ghana have been under serious threat of agricultural activities and encroachment. Claims of the farmers are that the protection of the forests will restrict them from having access to extend their farms or clear new lands for agricultural purposes but they expressed positive expectation on benefits to be received.

The traditional authorities within the HIA are also considered very pivotal to the implementation of REDD+. They have higher interest due to their previous ownership of the forests and concerns for the community members. A traditional authority said that;

"The programme will help us in being able to combat climate change as per the education we have received, however my concern is on how livelihood pf

some people in my community will be affected. Especially those not involved in the REDD+. (Traditional Authority, January 2022)”

Their claims are that the protection of the forest would affect the livelihood of members of communities since majority of the community members depend on the forests. However, they expressed that there is a need to protect our natural resources. NGOs that operate in the landscape with medium level of both interest and power with regards to the implementation indicated that there is a strong need to protect forests in the HIA as a means to combat climate change. Timber operators, just like Hunters and Herbalists, in the HIA claimed that the implementation of REDD+ has greatly affected their livelihoods due to difficulty in accessing the forests and opportunity to use the forests or forest products. These stakeholders have high interest in the protection of the forests as a whole but had low level of power of influence on the implementation of REDD+.

Other general members of the community including traders and teachers expressed an indifferent opinion on the implementation of REDD+. They had low interest as well as low influence on the projects. The district assembly which is expected to be a key actor in the implementation of the REDD+ programme in the HIA expressed lower level of participation in the projects. However, the assembly has high influence or power on the projects and holds a medium level of interest. The District Officer stated that:

“The benefit sharing ratios are already predetermined and that is there for implementation. When it comes to the sharing that is where they consider the accurate availability of resources and personnel. I cannot tell the specifics because the D.A. is not involved in the sharing of the benefits, whether monetary or non-benefits” (Government Official 2, February 2022).

The assembly claims there is a need to ensure there are efforts to fight climate change. This minimal involvement of district assembly in REDD+ is highlighted by Nuesiri (2015) on REDD+ in Nigeria where he found that local government authorities were excluded from the design and implementation of REDD+. Such issues hinder the development and progress of programmes like the REDD+, thereby posing challenges to the efforts of forest protection.

Analysis of Main Findings

Findings from the study are based on the research questions and have been presented in themes and sub-themes that emerge from the codes created and given to the transcribed qualitative data. Before eliciting the views of respondents on the research questions drawn from the objectives of the study, I initially asked of the respondents' knowledge on the REDD+ Programme and its benefits in the Kakum HIA.

Knowledge on REDD+ and Benefits Involved

With an objective to realize the knowledge of respondents on the REDD+ programme with all the accompanied benefits in the Kakum HIA, responses were elicited from participants on the themes General Knowledge on REDD+, REDD+ projects and activities, and Benefits of REDD+.

General Knowledge on REDD+

In the first place, during the interviews, participants were asked to tell what they knew about REDD+. The responses from participants regarding their knowledge on Reducing Emission from Deforestation and Forest Degradation (REDD+) were captured into the following sub-themes. The sub-themes that

emerged from the participants' own words were climate change, afforestation and deforestation.

Climate Change

Participants shared their views that the REDD+ programme, projects or activities are geared towards the fight against climate change. They responded by indicating that the Forestry Commission together with some other organisations visit the local communities and teach them what the REDD+ project is about. They added that it is important for all stakeholders, including farmers, to protect trees in their farms and forests. It is important not to clear all trees on their lands when they needed space for agricultural purposes since these trees store carbon by reducing the emission of carbon dioxide into the atmosphere. Participants also indicated that the uncontrolled cutting down of trees has been the reason for significant changes in the climate and that disturbs farming activities. The views of participants with regards to climate change are captured in the quotes below:

As a farmer, what I know is that Forestry Commission called us and taught us a number of things in farming. This includes protecting our forests, trees, lands and water bodies to prevent disasters caused by changes in climate. (Farmer 2, January 2022)

I know REDD+ is about climate change. For some time now the climate has changed worldwide and it has had negative effects on farming activities. Times and seasons have changed and that disturbs the world especially farming activities and so there are plans to fight these problems. (Farmer 7, January 2022)

Another farmer from Assin Bontuku also shared his views on knowledge of REDD+ as climate change activity in this way:

“The time we need the sun to shine, it does not and the time we need rains to fall, it does not and so it has made our farming very difficult and so REDD+ activities will help to solve these problems for us to get rainfall and sunshine at the times we expect them”. (Farmer 6, January 2022)

These responses on climate change were similar to views shared by the traditional authorities in the local communities.

“REDD+ has made us to know that we should protect our trees and water bodies. Due to that our people and farmers have been trained in doing that to help in fighting the changes in climate. (Traditional Authority A1, January 2022)

“What I know is that farmers are taught to leave trees or plant trees in their farms, especially our cocoa farms in order to protect our crops and also help in the fight against climate change”. (Traditional Authority E1, January 2022)

From the statements, it is realized that farmers in the Kakum landscape have knowledge on climate change. These farmers have been informed and taught on the causes of climate change as well as its effects on their lands, farms, forests and the world at large.

Afforestation

Responses gathered from participants on their knowledge of REDD+ revealed that the practices or activities in the programme involved much of afforestation. Views from the transcribed data informs the researcher that participants were aware that aside the practice of leaving trees in the farms and forest uncut, there should also be the planting of trees, especially in the farms of the farmers. These views are captured in the quotes below:

What I know is that forestry commission called us and taught us a number of things in farming. This includes planting of tress, protecting our forests, trees, lands and water bodies to prevent disasters caused by changes in climate (Farmer 2, January 2022).

We have been taught to protect our forest, water bodies and our own farms from bushfires. We are also taught to plant trees in our farms and that comes with benefits. We are informed that there will be benefits when we plant the trees and these benefits will be shared among stakeholders. The community will have their own and the district assembly will also have a portion”. (Farmer 4, January 2022).

Deforestation

Deforestation emerged as a sub-theme with regard to knowledge of respondents on the REDD+ programme. Participants' views shared revealed that deforestation is a key issue in efforts to have the REDD+ programme successfully implemented. Since REDD+ has its main objective to reduce emissions from deforestation, it is very important stakeholders and participants in the REDD+ programme have knowledge of deforestation and its consequences. This helps to reduce the rate at which people cut down trees for any purpose. Views shared by participants regarding deforestation are captured in these quotes:

“They made us know that changes in the climate have been as a result of deforestation and so there is a strong need to replant trees so that we can get the environment as given by the creator” (Farmer 4, January 2022)

“What I know is that the cutting down of trees and the bush fires have been the cause of changes in the climate.” (Farmer 3, January 2022)

Another farmer in Assin Kumasi also shared views on deforestation as a key aspect of the REDD+ programme in this way:

“What I know is that we are supposed to protect our forests and not cut down trees like we used to do. We are informed that we should get permits or permission from our elders and Forestry Commission before we cut down our trees.” (Farmer 2, January 2022)

Since it is important to know the level of knowledge and understanding of respondents on the programme they were involved in, questions that sought to elicit responses from participants on their knowledge of REDD+ were asked. In doing that, it was revealed that stakeholders involved in REDD+ programme in the Kakum HIA had appreciable knowledge of the programme and understood why there was a need to participate. Some participants revealed that REDD+ is about projects and activities that are geared towards fighting against climate change and these views are consistent with the views of Minang & Noordwijk (2014).

Others also stated that REDD+ is a programme by the Forestry commission to reduce deforestation and encourage afforestation. This information provided conforms to what the United Nations REDD+ programme is about as indicated by Ghana REDD+ Strategy paper (2016) and Nartey (2014). The efforts to have our local communities reduce the rate at which they indulge in deforestation and also to provide trees to farmers within these local communities to plant in farmlands are part of the activities that can help in bettering our environment through climate change mitigation (Forestry Commission, 2018)

REDD+ Projects and Activities

Specific REDD+ activities in various Hotspot Intervention Areas differ with landscapes, therefore to know from respondents the REDD+ projects and

activities carried out in the Kakum Hotspot Intervention Area (HIA), participants were asked what activities they had been involved in. According to the respondents, the REDD+ programme has been in existence only for a few years.

Two sub-themes which are Climate Smart Cocoa Farming and Training of farmers emerged from the projects and activities in the Kakum HIA.

Climate Smart Cocoa Farming

Participants were asked of the REDD+ activities that went on in the landscape and views were expressed on that question. Responses from the farmers and government officials indicated that most of the activities carried out in the Kakum HIA were Climate Smart Cocoa (CSC) practices. This is because the activities carried out were all geared towards fighting changes in the climate while increasing yields of Cocoa farmers in the landscape. The views expressed by participants on activities of REDD+ which reveals the practice of Climate Cocoa are captured as follows:

“We have been taught to leave trees and also plant trees in our Cocoa farms so that they can protect our farms. We get these seedlings from Forestry Commission and NGOs through our CREMA executives”.
(Farmer 8, January 2022)

“They told us if we want to have our cocoa farms lasting longer for us and our children, then we should leave trees or plant new trees in our farms. We should not cut them down and there will be a time if we grow, let’s say 50 trees, about 10 of them could be owned by us. We are also taught not to clear lands or bush very close to our water bodies. We should leave the trees at the banks of the rivers. Again, we are also taught to keep our water bodies very clean for our own safety”. **(Farmer 6, January 2022)**

During the focus group discussion, the climate smart cocoa farmers revealed that they had been advised to leave trees and plant trees in their cocoa farms and that was exactly what they did. They added Some of the trees even pull the rains for their crops and also protect the farms. The Forestry Commission gave the farmers tree seedlings to plant in their farms to help in cooling down the weather as a means to fight climate change.

These responses shared by farmers in the landscape were similar to the responses shared by government officials in the Hotspot Intervention Area. This view is captured in the quote below:

“There are climate Smart Cocoa Projects which are being implemented in the CREMAs with the Nature Conservation Research Centre (NCRC) , where the farmers are trained on best agricultural practices. The farmers are expected to implement them. we have been told that agriculture is one the factors of deforestation and Cocoa farming is the major farming activity. Vast lands are cleared for cocoa farming in all of these communities. From the NCRC’s research, it is realized that it is the increase of farmlands for the production of cocoa that is causing the degradation. Therefore, if the farmers are able to increase their yields per land area used for the farming, then there will be no need to increase the land size. So now we are helping the farmers to increase their yields per acre of land so that they will not increase the farmlands. The farmers have a perception that if the land size is increased the yield also increases not knowing the yield can be increased on the same land”.

(Government Official 1, January 2022)

REDD+ projects and activities carried out in the Kakum HIA as indicated by participants include Climate Smart Cocoa (CSC) farming. According to participants, seedlings of tree species and cocoa were given out to farmers.

These seedlings given to farmers are to be planted on their farmlands to serve as protection for the cocoa trees and also help in combating climate change. Respondents revealed that cocoa farming is one of the major causes of deforestation and so best agricultural practices which includes leaving trees uncut on their lands were expected to be practiced. These efforts were geared towards fighting climate change and are consistent with views of Agyei et al. (2014) on Climate Smart Cocoa (CSC) farming where they indicate that agricultural practices for the cultivation of Cocoa which involves the planting of trees are to combat climate change.

Training of Farmers

Participants of the study during collection of data expressed views on trainings and teachings as a core activity in the REDD+ programme. In most times, the trainings were particularly designed for the farmers in the landscape, where they were trained on making maximum use of lands available for farming without clearing more lands or cutting down more trees to get farmlands. They were also taught the importance of leaving river banks when clearing lands to protect their water bodies and also to leaving trees on farmlands within the landscape. These views expressed are captured in the quotes below:

“People used to cut trees anyhow and anytime from the farms and the forests but through the teachings and trainings from REDD+ secretariats, we have learnt that we have to leave the trees so that it will help us all in our survival. We also do the ‘Otee’ activity as a result of the REDD+ programme”. (Farmer 3, January 2022)

“...the ‘Agric’ people call us and train us on how to nurture the trees in our farms and how to cultivate coca to have enough yield at the end of

the year. We are also taught to leave trees and plant trees in our cocoa farms. Some of the trees even pull the rains for us and they protect our farms". (Farmer 2)

Another Farmer also stated that:

"The REDD+ project or activity here is that the farmers are given training and teachings to help prevent the cutting down of trees. They give to us free seedlings for both Cocoa and timber to plant them in our farms. The trees are planted to help in fighting climate change".
(Farmer 6, January 2022)

The traditional authorities in these communities shared similar views on training and teaching as part of the activities in REDD+ as below:

"The Forestry Commission comes here to train our farmers in lot ways to increase yields in our farm. They also give our farmers trees to plant in their farms" (Traditional Authority B2).

"We are thought how to better our cocoa farming in the community and also made to plant trees in these farms of ours. They call us and train us on how to nurture the trees in our farms and how to cultivate cocoa to have enough yield at the end of the year". (Traditional Authority A1, January 2022)

Participants revealed that deliberate and purposeful training of farmers in HIA was one of the significant activities carried out in the REDD+ programme. Farmers were trained in various ways to engage in best agricultural practices and to have increased yields per land area used since a research by an NGO known as NCRC revealed that the increase of farmlands for the production of cocoa in the HIA was a major factor of degradation and hence climate change. Agyei et al (2014) and the Forestry Commission (2018) made similar views where they found

that the clearing of land for agricultural practices served as a major factor of deforestation and therefore farmers need to be trained on engaging in agricultural practices that save the forest.

Benefits of REDD+ projects

As partakers and stakeholders in the REDD+ programme, it was in the interest of the researcher to find out all the benefits received by stakeholders in the projects. This information helped to understand the availability, the flow and the share of these benefits. In that regard, respondents were asked of the benefits they received from all the REDD+ project and activities ongoing in the Kakum HIA. Benefits in REDD+ were either Carbon benefits or Non-Carbon benefits and from the data, it was realized that stakeholders in the REDD+ programme at Kakum HIA received Non Carbon Benefits. This is due to the fact that trees nurtured in the programme have not gotten to the stage to receive financial rewards from the government or from the World Bank Funds reserved for REDD+. The data further revealed that the benefits received by stakeholders in the projects were both monetary and non-monetary with the non-monetary aspect being the majority in terms of what participants received as benefits. Non-Monetary benefits and Monetary benefits emerged as sub-themes on benefits in REDD+ projects.

Non-Monetary Benefits

During the interviews and focus group discussions, participants revealed all the benefits they received from the REDD+ projects. It was realized that majority of the benefits received by stakeholders and participants in the

programme within the Kakum HIA were non-monetary. The non-monetary aspect of benefits in the REDD+ were received even when the projects were still in the development stages. The non-monetary benefits received include; cocoa seedlings; increased yields; free training; seedlings of timber species and farm implements. These views shared by the participants in the study are captured in the following quotes;

“Ultimately, our involvement in REDD+ programme has helped us to get so much yields at the end of the year. This is because the trees provide shade for our cocoa farms and also protects the crops from wind storms. (Farmer 5, January 2022)

“...since I started being a part of the REDD+ activity, the officials have been giving us machines or farming equipment to help us in our farming. All of these help us to get the yields we expect by the end of the farm season. (Farmer 3, January 2022)

“Through the REDD+ programme we have been led to establish cooperatives which help to secure materials and equipment for our cocoa farming. They give us timber seedlings and cocoa seedlings for our cocoa farms and that helps us. (Farmer 7, January 2022)

The Forestry Commission in the Kakum HIA also shared similar views on the non-monetary benefits received by participants in the REDD+ programme. It was revealed that aside the above mentioned benefits, the project had also promoted a proper system for coordination among stakeholders involved in the project within the landscape. The government official explained that;

“...the projects have led to a better coordination among stakeholders the HIA as compared to how it used to be. The communities are also working together now through the formation of the CREMA because they do requests for all the communities in the CREMA and not for a

particular community. Farmers are also trained on a number of things. This includes the Combo nut, training on monitoring in the farms, we also organize capacity building for the farmers to have more knowledge on best practices in Agriculture. The District Assembly has also indicated that if the farmers need financial assistance they can come to assembly through the established CREMA. Due to that one of the CREMAs in the HIA has placed a request but yet to be fulfilled. The NGOs are planning on forming Village Savings and Loans Associations (VSLAs) for the Communities but the rate at which that is being done is not encouraging and we are yet to find out why that is happening. The farmers are also given free seedlings for both cocoa and timber species to be planted in the farms. All the institutions take the seedlings from the Commission to be given to the farmers for different reasons. Some take seedling because they want woodlots to cut for firewood, or for their farms, we take them from Forest Services Division (FSD) and then share to the farmers”. (Government Official 1, January 2022)

Traditional authorities within the landscape also gave similar responses on the non-monetary benefits received by stakeholders in the projects. These views are also captured in the statements below;

“There a number of things we did not know but through the teachings and training givens to us, we have such knowledge to help us in our cocoa farming. Because of the projects, our farmers have been receiving cocoa seedlings as well as tree seedlings to be planted for free in the farms”. (Traditional Authority C2, January 2022)

“The free timber and cocoa seedlings they give to us are part of the benefits I think we receive. Also, I believe our farmers are being trained on proper methods in farming because they are part of REDD+ and that is also a benefit. The trainings given to farmers is the reason we nowadays have so much yields at the end of the farming season”. (Traditional Authority E1, January 2022)

Questions asked on benefits of REDD+ projects revealed that according to participants of the study, benefits received are non-carbon benefits. It was further revealed that the benefits received by stakeholders of the REDD+ projects in the Kakum HIA were in the form of monetary and non-monetary benefits. Participants stated that majority of benefits received were non-monetary benefits. Amongst these benefits were cocoa seedlings and seedlings for timber species which were freely given to farmers who are participants of the REDD+ programme. The Forestry Commission and NGOs in the landscape also organises free training sessions for farmers and whiles providing free farm implements to these farmers. Nkhata, Mosimane, Breen, Crafford, and Hay (2011) and Agyei et al (2014) made similar findings that non-monetary benefits are part of the benefits received in REDD+ and this includes access to agricultural, economic and information resources.

Monetary Benefits

Stakeholders in the REDD+ programme also received monetary benefits aside the non-monetary benefits. It was pointed out that financial benefits were received from the practice of nurturing trees on the farmlands within the landscape. Mostly, financial benefits were derived from selling nuts from the 'Combo Nut Tree' which is referred to as 'Oteε' in the local dialect. Responses from participants which reveal such findings are captured in the quotes below;

“We also get financial benefits from keeping the ‘oteε’ trees in our farms when they come to buy the fruits. Since we started the REDD+ we have realized that we should not cut down the combo nut trees in our farms and forests and since we kept them the ‘agric’ people with some whites

come around to buy their fruits from us. I receive GHC7 when I sell a cocoa bag of mine and they send GHC1 to the forest people while GHC2 is also given the community fund. In all they pay GHC10 for a kilo of the nuts". (Farmers 6, January 2022)

"The Otee (Combo nuts) activity also provides us with money when we are able to leave trees and they buy them from us. Last year they came to buy from us and I received my money. When we sell a kilo of the nuts they pay GHC10, but GHC2 from this money is given to community and GH1 is also given to the government". (Farmer 8, January 2022)

Farmers engaged in the focus group discussion also revealed that since they started leaving the 'Otee' (Combo nuts) tree in their farms, they receive money for doing that. They added that trees they left in the farms also helped the cocoa trees to have good yields during harvest.

Again the Forestry Commission shared similar views on the monetary benefits received by participants as follows;

"Over the years, our famers used to just cut the tree known as "Combo nuts" or "Otee" but through the research of NCRC it is found that those trees have value and can be exported, so they leave such trees and the fruits are picked and sold. The farmers receive financial benefits in that. A kilo of the combo nut is sold at GHC10 but GHc7 is given to the farmer, GHC2 to the CREMA and GHC1 to the organization in charge of transportation". (Government Official 1)

Generally, the questions asked on benefits of REDD+ projects revealed that benefits received from REDD+ by stakeholders of the projects in the Kakum HIA were also in the form of monetary benefits. It was revealed that the expected carbon benefits were not the source of incentive to stakeholders but the non-carbon aspect. Through REDD+ the farmers have realized that it is important to

leave combo nut trees in their farms. The benefit here is that farmers gathered the combo nuts and sold them to receive money either from Forestry Commission or NGOs. They added that these benefits amounted to having significant increase in farm yields as compared to previous years. These findings are similar to the findings of Nkhata, Mosimane, Breen, Crafford, and Hay (2011) and Agyei et al (2014), where they reveal that benefits in REDD+ are both monetary and non-monetary.

Sharing of REDD+ Benefits in the Kakum HIA Addressing the 3 E's in Benefit Sharing

The first research question sought to elicit responses from stakeholders or participants of the REDD+ programme in the Kakum HIA to ultimately investigate the state sharing both monetary and non-monetary benefits that emerge from the REDD+ projects. Largely, the data from the study revealed that the mechanisms and arrangement for benefits sharing in the Kakum HIA did not conform adequately to the ideal equity, effectiveness and efficiency of an appropriate benefit sharing mechanism. When respondents' views were gathered on this research question, codes generated from their responses emerged with equity, effectiveness and efficiency, and monitoring as themes.

Equity

Participants were asked to give their personal views on how the equitable the sharing of benefits in the Kakum Hotspot Intervention Area had been. Responses from participants indicated that the sharing of benefits were unequitable due to a number of reasons. The views from participants were

captured into sub-themes which are benefits received as forest users or stakeholders; benefits received due to roles played in forest management and facilitators; and benefits to those incurring costs.

Benefits received as forest users or stakeholders

Views from participants revealed that the REDD+ programme coordinated in the Kakum HIA includes benefits to be enjoyed by stakeholders or forest users within the landscape. According to the respondents, benefits were received since they are forest users or as stakeholders and this was predominant among farmers interviewed during the data collection but traditional authorities held opposing views. These views were expressed in the quotes below:

“Yes please, anytime the officials come to our community to share the benefits to be received by participants in the programme, I receive something. At least I do not go back home without anything. The items mostly given to us are seedlings for Cocoa and other timber species, farm tools and fertilizers and sometimes they also train us on how to go about our cocoa farming to have a greater yield...” “... I receive these benefits because I have been a participant in the REDD+ project here since they started and I have been planting trees in my farm.” (Farmer 6, January 2022)

“...For me they give me fertilizers and tools that will help me in my farm to gain so much yields than the previous years. They also provide me with seedlings, both cocoa and timber species to be planted on my farmland. Those seedlings given out, I do not pay a penny for them...”

“...They selected me because I am a farmer and I have been a part of the REDD+ programme since they started.” (Farmer 9, January 2022)

On the other hand, traditional authorities engaged within the Kakum HIA revealed that they have not received any benefits from the REDD+ projects since it began.

These views are captured in the quotes below:

“I have not received any benefits in my role played as a traditional authority in this community. I believe when there are any benefits, a portion should be given to the traditional heads. Because we help in ensuring that our people do what is right or follow the instruction given by the Forestry Commission. We should not wait till there is enough money to be shared.” (Traditional Authority C1, January 2022)

“Yes, but only because I am farmer but not because I am a traditional authority. But as the community members take part of it, I believe it is for us all. When they buy the Ote, there is an amount giving to the community.” (Traditional Authority B, January 2022)

One of the hunters interviewed also expressed his view on the issue by stating that:

“They informed us that protecting the forest will help all of us as community members and that some benefits will come to the community through projects and facilities like school, water and toilet but we have not seen that on our community. If we are not getting what were promised, why don't we go back to making good use of the forest as we used to?” (Hunter 2)

Some farmers also revealed that the land tenure system they operate is problematic for them. This is because farmers who worked on lands owned by other people had problems with the sharing of benefits as these owners also claimed to have a share in the any benefit that emanated from the use of the land.

A farmer stated that;

“When our land owners hear that the government has come to share somethings to us, especially the farm implements or money, they always

demand that we share these things with them. Meanwhile all the produce from the farm we have arranged to share that one”. (Farmer 8, January 2022)

Uncertainty in tenure systems regarding projects like the REDD+ in the Kakum HIA leads to misunderstandings in the sharing of benefits. This influenced equity in the sharing of REDD+ benefits to stakeholders in the HIA, especially farmers. This confirms findings of Acheampong, Dawoe, Bosu and Asante (2014); Mulyani and Jepson (2013) and Agyei (2012) that uncertainty and ambiguity in tenure systems and lack of capacity are major challenges to REDD+ implementation.

Benefits received due to roles played in Forest management and Facilitators

From the interviews it was revealed that stakeholders of the REDD+ projects in the Kakum HIA expected benefits to be received due to their roles played in the management of the forest or other duties played in helping to preserve the forest. Such benefits as majorly expressed by the traditional authorities are not received. These views were captured in the following quotes:

“We do our best in supporting Forestry Commission and protecting the forest. We have even set up volunteer groups in this community for the purpose of protecting the forest but the truth is we have not received anything in the projects as facilitators or the due to the roles played in protecting the forest.” (Traditional Authority A1, January 2022)

“Since they started the projects we have not received anything in the management and protection of the forest. It is unfortunate but they keep telling us they help us with facilities like water and toilets. I think even from the beginning there should be benefits for the community or the

stool so that it will help in motivating our people to embrace the projects.” (Traditional Authority B2, January 2022)

Farmers engaged also shared similar views revealing that benefits are not accrued to them with regards to roles played in forest management. In their own words, they stated that:

“We have not received any benefit for our roles in managing the forest. We even organized ourselves to form task forces in order to protect the forest but in all that we have not received anything... Since they started the projects we have not received anything in the management and protection of the forest.” (Farmer 3, January 2022)

In the focus group discussion with farmers, it was also revealed that farmers had not received anything in the management and protection of the forest. They were very disappointed in the government. The farmers concluded that the measures for REDD+ had brought about some hardship in the communities.

The objective was to find out if the arrangements for sharing of benefits from REDD+ activities in the Kakum HIA addressed the 3E's in Benefit Sharing mechanisms. These 3E's are Equity, Efficiency and Effectiveness. The qualitative data revealed that the state and processes involved in sharing benefits that emerge from REDD+ were not appreciable or satisfactory. As the Rawl's theory of justice, according to Follesdal (2014), indicates that each individual has the right to a satisfying set of basic rights under the principle of distributive justice, it is important to ensure the arrangement for benefit sharing provides for all stakeholders in the implementation of REDD+.

Under equity, participants were asked whether they receive benefits as stakeholders, work done in the projects and for incurring costs due to the projects.

Farmers engaged in the study said that they received some benefits as stakeholders but other stakeholders including traditional authorities revealed that they did not receive benefits supposed to be given to them. Although Luttrell et al. (2012) indicates that local communities that strongly protect the forest should have strong claims in benefits emanating from the projects but the data revealed that stakeholders do not receive benefits in the roles they play in forest management and project facilitation. This confirms findings of Acheampong, Dawoe, Bosu and Asante (2014); Mulyani and Jepson (2013) and Agyei (2012) that ambiguity in tenure systems and lack of capacity are major challenges to REDD+ implementation.

Benefits to those Incurring Costs

Responses from participants also revealed that participants and stakeholders who have been incurring some costs due to the implementation of REDD+ in the Kakum HIA. These are also captured in the quotes below:

“The cost I can talk about is when we have to give out lands to them for the nursery. We do this because we believe the projects will help our farmers and the community as a whole, there we willingly give the officials from government free lands to carry out the activities of the REDD+ projects. You know we could have sold such lands for money to develop our community. All these are done but we have not receive benefits from the government for the stool or for the community as a whole.” (Traditional Authority D1, January 2022)

“Since we are protecting the forests, it has allowed a lot of animals to have their peace in producing offspring and sometimes they leave the forests to destroy our farms close to the forest reserve. ...there have not

been any compensation or benefits received due to these happenings”
(Farmer 4, January 2022)

“...the cost we incur in these projects are mostly transportation to move the seedlings from where they are shared to our farms and labour cost in planting them. Most of the times the sharing of the items is done at the convenience of the officials from forestry commission and so they share them at place they are okay with, mostly at Bosomadwe. What happens is that, farmers here will have to hire tricycles to go for the items and transport them to this community.” **(Farmer 7, January 2022)**

Participants indicated that their expectation were that if due to the projects they incur costs, the government should find a way to compensate them out of the emanating benefits from the projects. Such expectations were never reached and therefore they felt very disappointed on such happenings. An example of the cost is when animals invaded farmlands close to the reserved forest and destroyed the farm crops. This indicates the limited level of equity in the arrangement for sharing REDD+ benefits in Kakum as some respondents added that such issues in the sharing of benefits did not motivate them to support the government in having a successful implementation of the REDD+ projects. This confirms Agyei et al (2014) findings on success or failure of projects, concluding that the likelihood of projects failing increases when the planners of the project fail to design a benefit-sharing system that is considered equitable and transparent.

Effectiveness and Efficiency

The efficiency and effectiveness of mechanisms are very crucial for benefits sharing especially when they are for interventions and projects that lead to change in behavior. In literature, a benefit sharing mechanism regarded as

efficient and effective is one that is able to make benefit an incentive to bring about change in behavior that can lead to an emission reduction and should directly go to the actors in the process. In analyzing the data, it was revealed that the benefit sharing mechanism for REDD+ in the Kakum HIA was not efficient and effective due to a number of reasons. From the respondents own words, the responses were coded and had two sub-themes emerging. These sub-themes were coordination and information sharing, and transaction Cost.

Coordination and Information Sharing

Participants in sharing their views on the state of benefit sharing in REDD+ with more emphasis on efficiency and effectiveness indicated that necessary and relevant information sharing was not properly done in the HIA. Sometimes information given were not into details but very shallow. Also, Coordination among stakeholder was not done appropriately in the landscape. Government institutions like the Forestry Commission and the Forest Services Division (FSD) who were the lead actors in implementing REDD+ do not accurately ensure proper coordination amongst the stakeholders in the HIA. These views are captured and stated in the quotes below:

“No please we are only informed of the dates for sharing but not exactly how the sharing should be done. It is the community representatives as CREMA executives that are mostly informed of these issues. the problem is they do not usually relay the information to farmers and community members.” (Farmers 2, January 2022)

“This issue is really of importance because how can you tell me to join something and say that we will be sharing item as time goes on but you only determine how the sharing will be done. That is even not democracy

it is total authoritarian rule. They only inform us of the benefits and then come share but the how we will share the benefits are never discussed before implementation.” (Farmer 7, January 2022)

During the focus group discussion, the farmers revealed that when there were issues like misunderstandings, all stakeholders met with the Forestry Commission officials to discuss. When that happened, all the stakeholders were present, including the traditional authorities. The Forestry Commission mostly engaged the farmers through the NCRC. Therefore, interactions with the farmers by other stakeholders was considered satisfactory.

Government officials and traditional authorities also shared their views on the effectiveness and efficiency of the benefit sharing system. In their own words they expressed that:

“Yes, they called all traditional authorities together with the community members to inform us about the projects and some of us were ready to join because they promised it will help to increase our yields. The only thing is what exactly will be received is not told to us but we are given a general overview. Sometimes when the exact benefits are communicated to us it will be enough motivation to join or to continue being a part of the programme.” (Traditional Authority A1, January 2022)

“No please the local communities are not involved. The REDD+ secretariat designs all the processes and arrangements and then communicates them to us all as stakeholders. Last time we met them I even mentioned that they should not be doing it like that but nobody seems to care much about it”. (Government Official 3, January 2022)

In terms of effectiveness and efficiency, the study revealed from the that benefit sharing arrangements in Kakum were not effective and processes involved in sharing the benefits were also not efficient. This means that the

arrangements for sharing benefits in Kakum were not able to make benefit an incentive to bring about change in behavior that leads to emission reduction. Sub-themes used in analysing the data had coordination and information sharing, and transaction cost as the focal point to analyse the state of benefit sharing in the Kakum HIA in terms of effectiveness and efficiency. This section also revealed that benefits that emerged from REDD+ did not go directly to the actors in the process.

According to Moeliono, Gallemore, Santoso, Brockhaus and Di Gregorio (2012), an efficient and effective benefit sharing arrangement leads to low transaction costs due to the fact that there will be proper coordination, no overlaps of functions of ministries and transparent financial monitoring. However, speaking to respondents, it was realized that the lead actors of REDD+ implementation were not ensuring proper coordination amongst the stakeholders and relevant information dissemination was not done appropriately in the Kakum HIA. This information confirms the conclusions of Luttrell et al. (2012) on benefit sharing in REDD+. Participants revealed that information given to the local community members were always not in details.

These issues raised by participants and stakeholders of the REDD+ projects in Kakum, reveal that the processes are against the core tenets of environmental justice, as it demands that every individual has the right to fully partake in the planning and implementation of policies as equal partners at all levels of decision making according to Ramirez-Andreotta (2019)

Transaction Cost

Respondents' views on how efficient and effective the mechanism for sharing benefits in REDD+ with more emphasis on transaction cost revealed that the process and strategies to share benefits from REDD+ in the Kakum HIA led to cost being incurred by the beneficiaries. Participants in their own words revealed that:

“Yes, there have been costs incurred due to the projects. This is because when they bring the seedlings they leave them at Assin Kuruwa and so we have to go there by ourselves to pick them and transport them here. When that happens we have to hire tricycles to transport them from Kuruwa.” (Famrers 8, January 2022)

Traditional authorities talked about having to give out lands for the nurseries. They do that because they believe the projects will help farmers and the community as a whole. They always willingly gave the officials from government free lands to carry out the activities of the REDD+ projects. Some traditional authorities stated that they could have sold such lands for money to develop our communities.

The data revealed that the arrangements for sharing benefits in the area led to costs being incurred by beneficiaries and had been regarded as unfair by the participants. Such occurrences were not enough motivation to cause a change in behavior as an appropriate benefit sharing arrangement should. Some farmers told us that they kept quiet and still went for the benefits they deserved and that was because they had no options left. These findings are in line with the finding of Myers et al (2015) and Mulyani and Jepson (2013) on benefit sharing associated

with initiatives that aim to reduce emissions and forest governance respectively where it was revealed that local communities bear costs and burdens in the REDD+ programme.

Monitoring

One of the topical issues on which respondents were interviewed was monitoring. Data from the study reveals that the level of monitoring in the REDD+ projects with more focus on benefit sharing was very low. This revelation is captured in the quotes below:

“I think if there are systems in place to check whether the rights things are being done anytime a particular action is taking by officials of the forestry commission, it will ensure that farmers will receive exactly what we are supposed to receive. Because there is nothing like that, they can come and give you anything at all and with that you cannot go to court because it is something you are receiving for free. Since we started, we have never seen anyone or people coming around to ensure we as participants got what we deserve.” (Farmer 4, January 2022)

“Well since we started I have never realized or seen people come around for the purpose of monitoring the activities here in the community. The fact that such officials are not sent here to monitor the activities of the programme is problematic because those sent here mostly distribute the benefits with their own discretion instead of following a particular schedule”. (Farmer 6, January 2022)

During the focus group discussion, climate smart cocoa farmers engaged in the in the communities also gave similar views that they have never seen anyone coming around to ensure they got what they deserved but sometimes the CREMA executives were supposed to check the progress on the activities. They expressed

that was not enough because the CREMA executives themselves are also beneficiaries in the projects.”

The District Assembly official interviewed gave a response that supports the views of farmers on monitoring in Kakum HIA. In his own words, he said that:

“I initially told you we have not being involved in the sharing of any benefits and therefore we have not been able to monitor. At the District assembly, myself as the District planning officer and the Director of Agriculture are in charge of monitoring but we haven’t been informed of the sharing to go and monitor.” (Governmental Official 2, January 2022)

Investigating into the state of REDD+ benefit sharing in the Kakum HIA with regards to how the sharing of benefits were monitored by authorities and stakeholders in charge revealed that there had been no form of monitoring by appropriate authorities. Respondents revealed that since the start of REDD+ projects and activities in the Kakum HIA, there had never been any personnel in the communities to check whether the sharing of benefits was done appropriately or to check if beneficiaries received what they deserve. This information confirms the findings of Mulyani and Jepson (2013) on forest governance where coordination issues which include lack of capacity and monitoring systems have been a challenge to REDD+ implementation.

Since there were no checks of any sort to ensure beneficiaries received the benefits they deserved, officials who were in charge of the distribution tend to share the benefits anyhow they deem fit and also took advantage of the situation to indulge in corrupt activities. This also demotivated the participants of the

projects and hence retarded progress in REDD+ implementation in such communities or the HIA. This information also corroborates the findings of Mulyani and Jepson (2013) on forest governance, where it was revealed that coordination issues and lack of capacity undermines the success of REDD+ implementation.

Factors that affect the flow and sharing of benefits in REDD+

The second research question elicited responses from participants about their views and experiences on the factors that affect the flow and distribution of benefits that emerge from REDD+ in the Kakum HIA. This was of interest to the researcher because it helped to know and understand if stakeholders in REDD+ were receiving what was due them or not. When the sharing of benefits is unequitable, it serves as a disincentive to partakers in the programme and clearly indicates injustices in the system. According to the respondents there are number of factors that affect the flow and sharing of benefits that emerge from the activities in REDD+ within the Kakum HIA. Four major themes emerged from the responses given by the participants under this research question. The themes were limited resources, reaching communities, elite capture and government policies.

Limited Resources

It was revealed that the sharing of benefits, both monetary and non-monetary were greatly affected by the limited availability of resources for the sharing of benefits. Most often, in the sharing of non-monetary benefits, the benefits to be received by beneficiaries were not enough for the number of people

to who deserve them. Majority of the respondents revealed that they never received the exact amount of benefits they deserved from the Forestry Commission. This mostly also served as a disincentive to the implementation of the REDD+ programme in the community. Views from the participants on how limited resources affected the equitable flow and sharing of benefits in REDD+ are stated below:

“My problem about how they share the items to us is that it is always not enough. Last time when they came to check things with us, I saw that I was supposed to receive 50 seedlings, but when they came around to share them, can you believe that I only received 26? I do not understand and my question is what happened to the rest”. (Farmer 9, January 2022)

“When they are coming to share, they come with a few nurseries for about three communities, can you imagine. How do you expect us all to get what we need when the number of seedlings meant for a particular community is to be shared by three communities? So what happens is that people either get a small number of seedlings for their farms or they do not get some at all”. (Farmer 6, January 2022)

One farmer shared a view on limited human resources as a factor that affected the sharing of benefits. In his own words, the farmer stated that:

“Sometimes the number of people who come to share the items are just not enough to do a good job. You see, when they are coming to write our names they use the CREMA executives here and so that is done easily and fast. But when it is time to share the items they only use the Forestry Commission Officials and that really causes lots of problems and delays. Also the number of items they come to share is mostly not enough and some people end up not getting what they deserve”. (Farmer 5, January 2022)

During the focus group discussions participants also shared similar views on availability of resources by informing that the number of items they brought to share in the communities were not enough. Mostly the FC operate with ‘first come first serve’ and so most of farmers did not get what they deserved. Specifically, on seedlings, what the FC brings to the HIA were not only for a community but for about four communities and that was why it was mostly not enough. They added that if the FC had decided to come with seedlings for only one community at a time, then the sharing will be enough and appreciable.

The forestry commission official also revealed similarly on the issue and why that happens in the HIA. She stated that:

“The Forest Services Division (FSD) informs us that anytime we want to give out seedlings to farmers, we should inform them earlier so they add to their nursery but this mostly does not happen because the orders do not come on time. So mostly we just go there and take any number of seedlings available and go to share them at the communities. That is why the items are sometimes not enough when we share”. (Forestry Commission Official 1, January 2022)

Analysis of the data from stakeholders of the REDD+ projects executed in the Kakum Hotspot Intervention Area (HIA) revealed that resources being limited negatively influenced the flow and sharing of both monetary and non-monetary benefits that emerge from REDD+ projects. Although, the US Environmental Protection Agency (2017) states that according to the theory of environmental justice, all policies and arrangements should be based on mutual respect and justices for all people and free from any form of discrimination, responses from

participants show that there were injustices in the system that operates the implementation of REDD+ in the Kakum landscape.

The availability of resources to ensure benefits were given to the stakeholder who deserve them was very crucial to the success of the programme and its continuous implementation. In this point, the limited resources indicate that resources to ensure successful sharing of benefits were limited and the benefits which are also considered as resources were limited. These resources included government officials as human resources to do the distribution, motor or tricycles to reach beneficiaries, and seedlings and farm implements given to farmers as benefits for being part of REDD+. Majority of the farmers engaged revealed that benefits received were always not up to what they deserve due to limited resources. This finding corroborates that of Sherpa (2014), Mahamed (2018) and Mulyani and Jepson (2013) that capacity and roles played by government agencies have influence on the sharing of benefits of REDD+.

Corruption and Elite Capture

The data continued to reveal that elite capture and corruption were major factors that affected the flow and sharing of benefits that emerged from REDD+. The realization is that items shared to participants in the REDD+ projects implemented in the Kakum HIA were always not enough because the items were sold to some other people, both within the community and outside the community. It was also revealed that people who usually led the groups of farmers as Cooperative unions took much of the items at the expense of the ordinary farmers in the community. This point is elaborated in the quotes below:

“...for the sharing of the benefits, I think corrupt activities really goes on. I know someone who is never a part of the farmers who decided to join REDD+ but he always receives some of the seedlings when they come to share. I really don't understand that but I think they sell to other people. Again, the fact that they sometimes do not come to this community to share but in our neighbouring communities is worrying.”
(Farmer , January 2022)

This is an issue of rights of participants of the REDD+ programme as only participants and stakeholders are expected to receive the benefits from REDD+ projects. In situations where participants who had the right to receive such benefits were denied but people who were not involved in the project received benefits, the participants had not been treated fairly and shows injustice in the system operating the programme.

Another farmer also revealed that;

“I used to be part of the Cooperative unions here but I decided to quit. This is because I realized our leaders usually get what they need and sometimes even more when it comes to the sharing of the items. Why should that be the case. Meanwhile some of us will struggle and will still not get close to half of what we requested or deserve per our land size. Is it because they went far in education or what? That is my worry in the sharing of the items”. **(Farmer 7, January 2022)**

During the focus group discussions participants also shared similar situation of corrupt activities in the HIA. In explaining this, they revealed that some officials kept some of the items to be shared for themselves and sold them later on. Sometimes people who did not register or write down their names manage to get the seedlings and those of who were part would not get the benefits. This led to misunderstandings and conflicts. They also added that not all the farmers were

literates and so when there was so much documentation in a formal way, such people did not get their deserved portion of the benefits. The elites in the communities took all the benefit since they felt they fought for such benefits.

One of the traditional authorities within the HIA also shared a similar view as stated below:

“Corruption is something that is everywhere, I think some people do not get their own because they sell them to people who are ready to buy them. I also believe they work out with those people who are leaders and keep the items”. (Traditional Authority D1, January 2022)

Data for the study revealed that corruption and elite capture was one of the major factors that affected the sharing of benefits from REDD+ in a more equitable manner as compared to how the sharing had been. The US Environmental Protection Agency (2017) states that according to the theory of environmental justice, all policies and arrangements should be based on justices for all people and free from any form of discrimination. However, interviewing respondents in the study, it was realized that items to be shared to participants of REDD+ projects were always not enough because the items were mostly sold to other people, both within the community and outside the community.

These issues are reflected in the study by Standing and Gachanja (2014) on the political economy of REDD+ in Kenya where corruption challenges were identified with responses. Due to this information, I went further to ask if there were leaders among the farmers to promote their interest. It was again revealed that the people who usually led them as cooperative unions also engaged in these

corrupt activities by taking or keeping much of the items at the expense of the ordinary farmers in the community.

Reaching Communities

Data from the study also indicated that the flow and sharing of REDD+ benefits in the Kakum HIA was greatly affected by the inability of the Forestry Commission officials to reach all the local communities within the Hotspot Intervention Area or within a particular Community Resource Management Area. What happened was that the officials mostly settled at one community within the CREMA and expected all farmers within that particular CREMA to travel for their benefits or items for the projects. Farmers who were unable to make it to these communities where the sharing happened did not get what they deserved and therefore they lost out on the benefits. These points are supported with claims from respondents' views in the following quotes:

“Mostly when they are coming to share the benefits they stay at the other towns and ask us all to come for them in those towns. That is very challenging because we have to hire ‘aboboyaa’ (Tricycles) to go and pick our items”. (Farmer 3, January 2022)

“Also, at first when they are supposed to bring the items or seedlings to this community they found it very difficult to do so due to the nature of our roads when it rains but currently the government has done some work on them so we are waiting to see how it would be. When it happens like that, we have to get tricycles to pick our share from the previous community to our community”. (Farmer 7, January 2022)

The government official from Forestry Commission also gave a similar view on their inability to reach all communities within the HIA. She revealed that:

“Roads in the Landscape are very terrible but we try as much as possible to reach them. The NGOs mostly go with motorbikes and that is really not safe at all. Sometimes some of the officials sent to the communities are demotivated to reach all the communities and so they select a particular community within a CREMA and ask farmers in the surrounding communities to come for the items”. (Government Official 1, January 2022)

Another Government official also shared a similar view and in his own words he added that:

“Yes, we are able to reach them. but there are some communities we find it difficult to get to them due to the roads. Some of the communities do not have proper mobile phone networks and so it is sometimes difficult to reach them to inform them about our coming. Sometimes if the CREMA executives do not call us to know what is going on, we do not get to inform them”. (Government Official, January 2022 2)

The qualitative data also revealed that one of the factors that affected the equitable sharing of REDD+ benefits in the Kakum HIA was the difficulty in reaching communities within the designated area. This factor relates with the limited resources issue as a hindrance to equitable benefit sharing. If government officials in charge of distributing benefits both monetary and non-monetary were not able to reach the communities where the beneficiaries reside, the beneficiaries were not able to receive what is due them. Due to the difficulty in reaching communities, officials of forestry commission usually selected one of the communities easily accessed as the point of distribution to all the surrounding communities and participants who were not able to make it to these communities for sharing lost the benefits. Other participants also revealed that if they did not

have money to transport the non-monetary benefits from the communities being shared to their communities, they did not bother going to receive the items.

Government Policies

Views from respondents in the qualitative data also revealed that there were some government policies that interfered with the sharing of benefits. The claims were that if a farmer was able to nurture a tree in his farmland, whatever benefits that came with it should wholly be for the farmer and not the government. These views are stated in the quotes below:

“I have a problem with the fact that all the trees belong to the state. If I have been able to nurture trees in my farmland how do you then tell me, it belongs to the state. So who will take a large portion of the benefit from the activity? Forestry commission takes a part and then the district assembly also takes a part. Are they all not under the government?” (Farmer 4, January 2022)

A government official also revealed that some governmental policies also influenced their arrangements and processes to have the benefits shared fairly and equitably. She stated that if the trees were owned by the state, it limited the economic rights of the local people to the trees. This view is also stated below:

“The major problem is the trees. The trees are for the state and that is the problem we face. You know when the laws of our country were made, we were not planting trees but now people are planting trees and others also managing them so we should all benefit. The mindset of people is that, to benefit from a tree, you should cut it down but that is what we are trying to change. Therefore, people or farmers have been made to believe and accept that we can benefit from trees even when we do not cut them. That is why they are receiving financial benefits from the nurturing the combo nut tree. Therefore, if after all these efforts, the

trees are said to be owned by the state, then it is problematic”.
(Government Official 1, January 2022).

Government policies were identified as a factor that influences the equitable flow and share of benefits from REDD+ in Kakum. With knowledge that all trees in these areas belongs to the state and therefore benefits shared should include the government, which is represented by both forestry commission and the district assembly was problematic to participants in the projects. The claims by stakeholders are that if a farmer was able to nurture a tree in his farmland, whatever benefits that comes with it should wholly be for the farmer and not the government. This factor confirms the findings of Mulyani and Jepson (2013) on forest governance and Sherpa (2014) on the sharing of potential benefits of REDD+ in Indonesia and Nepal, where lack of capacity and resources, and coordination issues affected equitable sharing of benefits.

In exploring to identify factors that affect the equitable flow and sharing of benefits in REDD+, some themes from literature which were possible factors were used as themes to elicit participants' views on these factors. These themes are Arrangements or Law enforcement and Selection of Beneficiaries.

Arrangements or Law Enforcement

From the data for the study, it was revealed that laws or arrangements and the enforcements of these laws for the sharing of benefits also influenced the flow and sharing of benefits in the Kakum HIA. There were laws or arrangements known to the CREMA executives within the HIA but according to the respondents, these laws or arrangement were not strictly enforced during the sharing of the benefits. This point is expatiated in the statements below:

“Yes, there are laws and arrangement for the sharing of these benefits. If there were no arrangements, they would not have asked us to write our names. The challenge is that they do not use the names we wrote to them when they came to share the items. I mean they do not follow their own rules in the sharing of the benefits and that is why some of us do not get what we deserve anytime they come here to share”. (Farmer 7, January 2022)

Another farmer also added that:

“...there are laws and arrangements for some of the benefits they share not all. they ask us to draw lines on our farms so that they come to check and give us the appropriate seedlings. The laws are not really enforced because sometimes what is promised is not what we receive when they come to share them”. (Farmer 3, January 2022)

Participants of the study revealed that they were aware there are laws and arrangements for the sharing of benefits from REDD+ and that reveals they were aware of their rights to those benefits as participants. The problem associated here was that the government agencies did not enforce these laws and arrangements when time was due for the sharing of benefits. This led to some beneficiaries not receiving their benefits. These happenings reveal that justice does not prevail and the rights to receive such benefits are curtailed.

Selection of Beneficiaries

From literature the process for the selection of beneficiaries also significantly influences the flow and sharing of benefits but the data from the study reveals that farmers and participants in the REDD+ programme were not explicitly aware that the sharing of benefits from REDD+ in the Kakum HIA was influenced by how beneficiaries are selected but believes other factors do. In

probing it was realized from comments on other issues that the beneficiary selection process actually affected the distribution of benefits. The realization is that officials who do the registration were mostly different from those who did the sharing of the items. Views shared by some participants on the selection beneficiaries as a factor that affects the equitable flow and sharing of benefits were stated below:

“What I can say is that mostly the people that lead the registration changes at the point these benefits are going to be distributed. During registration community members are used in that but our people are never involved when the benefits are being shared”. (Farmer 8, January 2022)

“...sometimes the number of people who come to share the items are just not enough to do a good job. You see, when they are coming to write our names they use the CREMA executives here and so that is done easily and fast. But when it is time to share the items they only use the Forestry Commission Officials and that really cause lots of problems and delays”. (Participant 5, January 2022)

A Traditional Authority in the HIA also shared a similar view which revealed that the process of selecting beneficiaries and sharing benefits with that process affected how equitable the sharing is:

“Not exactly, but the people who come to do the writing of names are totally different from those who come to share the benefits...” “...if forestry commission officials are sharing the benefits it will help, so they should always be the ones to write our names but we prefer our CREMA executives to do the writing of names and sharing of the benefits”. (Traditional Authority A2, January 2022)

How beneficiaries were selected in the Hotspot Intervention Area as well as the non-enforcement of arrangements for the sharing of benefits were also

confirmed as part of the factors that affected the sharing of REDD+ benefits equitably. Mostly, the process and people involved in writing names of the potential beneficiaries were totally different from those involved during the sharing of benefits. CREMA executives who were more familiar with the people in the local communities were often in charge of listing all potential beneficiaries. However, during the sharing of benefits different set of people who were often government officials are in charge.

This mostly brought about misunderstandings as some beneficiaries' names miraculously disappeared from the list. Such coordination issues affect the sharing of benefits in almost all the communities in the HIA. These factors as revealed by the data from the study are confirmations to the findings of Mulyani and Jepson (2013) on forest governance and Sherpa (2014) on the sharing of potential benefits of REDD+ in Indonesia and Nepal, where corruption, lack of capacity and resources, and coordination issues affect equitable sharing of benefits.

Impact of REDD+ implementation on Rights of Forest Dependent Communities

The third research question sought to find out the impact of the implementation of REDD+ on the rights of local forest users or dependent communities close to the forests reserved for conservation purposes. As Rights of forest dependent communities in this study are explained as customary rights enjoyed by communities within and around forests to have access to and use the forest or forest products, the objective was to elicit responses from participants

regarding how their rights to the forests had been affected in any way since the implementation of REDD+. This is in line with Filmer-Wilson's (2005) argument that the Right-Based Approach in development or an approach to development which protects human rights is crucial for achieving sustainable development. Generally, the qualitative data revealed that the implementation of REDD+ has had negative impacts on the rights of local forest users and that was the main theme for this research question. Largely, all concerned stakeholders in the Kakum HIA engaged indicated an effect on their rights as forest dependent communities. The sub-themes that emerged under this research question were right to access, right to use and right to own

Right to Access

Access to forests reserves within the Kakum HIA was limited to all members of the local communities according to the participants involved in the study. This limited access was more severe with regards to the National Park within the Hotspot Intervention Area. Local communities were not allowed to enter the National Park and people found in the park were mostly punished or made to face the law. For the other reserves within the HIA, local communities were able to enter them only when the Forestry Commission gave approval. Views shared by some stakeholders are stated below:

"There are game people guarding the forest and so we are not allowed to enter the forest. If you enter the forest and you are caught by the guards, you will be punished". "...the government gave out some benefits to the communities since we are not given access into the forest, but those of us in Assin Ampenkro never got our share in that token. When that was

given they got into the hands of the traditional leaders in Assin Kuruwa and they sat on it". (Farmer 2, January 2022)

"In fact, we cannot go into the National Park, last time I heard someone went there for herbs, the wildlife people beat him inside the forest and brought him back. If it is the other reserves, then we can seek for permission and use the place". (Labourer, February, 2022)

Traditional Authorities in the HIA also added that:

"We do not have any access to the forest reserve since they protect it and so if you are caught they will beat you and send you to the police station. That is not entirely because of REDD+ but government's decision to protect the forest from getting the depleted". (Traditional Authority E2, January 2022)

"The implementation of REDD+ has intensified our cessation of accessing the forests and so if you are found inside the forest the guards there will punish you. We have also tried our best to not go into the National park but it is not easy for most of our people. I think this is partly because of the teachings given to us about the benefits in leaving trees untouched". (Traditional Authority C1, January 2022)

Interviewing government officials, it was also realized and confirmed that the local forest users do not have access to the forest reserved as a National Park but there are other reserves under the Forest Sector Division for the HIA where people take permission to access them for several purposes. In her own words the government official stated that:

"There are various management options for various areas. The forest reserves under the FSD, people can go in and pick Non Timber Forest Products but for the National Parks under the Wildlife Division nobody goes there for such reasons but maybe research purposes. Even with that you will need permission to do that..."

“Now because of the REDD+ projects in the communities, some have assigned some forms of managements to their forests and they are protected like the forest reserves. Therefore, there are regulations on access and the people know what to do there and what not to do there. Access to unprotected areas are not the same as protected areas”.

(Government Official 1, January 2022)

In getting to know the views of all stakeholders affected in the conservation of the forest, other forest users aside farmers were also interviewed. In their views they also revealed how their rights are influence:

“It has really disturbed those of us into timber. That is our only way to survive in this country and the fact that nobody is allowed to enter the main or protected area worries us. We are only left with the smaller forests around and even with that there are stricter measures around them now. At first we had the opportunity to cut timber from the farmlands but now all the farmers want to keep the trees on their farms and so that has also become a problem for us.” **(Timber operator 1, February, 2022)**

“At first we had the opportunity to go into the main forest for herbs to solve a number of problems since that is my work in the community but that has been affected severely. There are a number of these herbs we work with that cannot be found in the farmlands or smaller forests, but they are mostly only available in the thick forest which has been reserved and protected now. So our chance to enter that forest has been taken away and our chance to get these herbs have been limited too.” **(Herbalist 1, February 2022)**

From the data collected and analysed, it was revealed that the rights of stakeholders were affected in general but of different forms due to the implementation conservation and protection of forests in the Kakum HIA. These issues were similar to concerns raised by local forest users in Kenya as

revealed by Standing and Gachanja (2014) on the political economy of REDD+ in Kenya, where they revealed that the rights of local forest users are crucial to the implementation of REDD+. Right to access the forests had been very limited and therefore usual activities of these forest dependent communities were also affected.

Community members who used to enter the forest for various purposes which include farmers, herbalists, hunters and others, no longer had the total freedom to enter the forests. This confirms Marfo et al's (2013) position on how rights of stakeholders are impacted by the implementation of REDD+. It was indicated that the Wildlife Division of the Ghana Forestry Commission had security persons in the forest reserves to punish any community member who entered the forest. The respondents further revealed that such practices helped their ecosystem but it had negative impacts on their livelihood. These confirm the findings of Luttrell, Loft, Gebara and Kweka (2012) and Ghana REDD+ Strategy paper (2016) which informs that the recognition of rights of local communities has been a challenge in the implementation of REDD+. This is informed in the conceptual framework of the study as it is indicated that the recognition and protection of rights are crucial to having a successful implementation of REDD+, which means emission reduction.

Right to Use

From the data, participants also revealed that their right to use the forests and forests products have been affected by the implementation of REDD+. Forest

users who enter the forests for other purposes aside the cutting down of trees also shared views on how the implementation of REDD+ has impacted on their rights to freely or comfortably use the forest or forest products. In their own words, the stakeholders revealed that:

“At first we were able to go into the forest to pick snails and even herbs for medicinal purposes but that right has been taken away from us since it the government started protecting it”. “...it is difficult to go and use things within the forest but if we are able to get permission from the Wildlife people then we are allowed to use some of the Non Timber Forest Products there”. (Farmer 5, January 2022)

“At first, we were able to firewood from easily from unprotected forests but that is no more. For the forest reserve because we are not allowed to enter, we are not able to use the products there”. (Traditional Authority E1, January 2022)

Another traditional authority also added that:

“Some people are allowed to go into the reserves for non-timber forest products when they are given permission but not the National Park. Example is there are herbalists in these communities who need herbs for their work, so after permission is sought, they are allowed to enter the other reserve. I think it makes their work difficult”. (Traditional Authority C1, January 2022)

This prompted the need to interview herbalists within the HIA to have their views.

One of the herbalists engaged confirmed the claims by revealing that:

“As herbalists the only thing we are more interested in are the forest products and that is where we get the herbs. As nobody is allowed to enter the protected forests, it is therefore difficult to have access and get to use the forest products. Also, our forests here are sacred for traditional purposes... ...Together with the farmers, everyone in the community does not have any access to the protected forests. The

government has brought in some security men we call them wildlife and they are in charge of punishing people who enter the forest.” (Herbalist 2, February 2022)

Government officials interviewed also shared a similar view by stating that:

“...When they are clearing land for farms they cannot take any timber from the reserve but they can get firewood from there with permission from FSD. The farmers are allowed to plant crops like maize and plantain while they plant the trees and nurture them for about three years. After the three years they leave the forest. There is a benefit sharing arrangement for the trees they plant in the reserves and that is like 60% to 40%. All the farmers get what they deserve because there is documentation on all the processes and people involved”.

(Government Official 1, January 2022)

The rights of local communities within the Kakum HIA to use the forest or forest products had also been greatly affected due to the implementation of REDD+. Stakeholders interviewed or engaged revealed that it was very difficult to possibly use anything in the forest. Other forest users aside farmers which include hunters, herbalists and timber operators, also revealed that their rights to use forest products had been restricted and that affected their livelihood. They were not able to use these forest products as they used to have access to them in previous years.

Herbalists revealed that they were not able to get herbs from the deep or main forests to advance their business just as timber operators engaged added that the introduction of REDD+ and its activities had prevented their ability to advance their only source of livelihood. These findings also corroborate with findings of Luttrell, Loft, Gebara and Kweka (2012) and opposes the Right Based Approach (RBA) in development as according to UNICEF (2015), there should

be deliberate and systematic enhancement of human rights in all aspects and dimensions of programme and project development as well as its implementation.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presents the summary of results of the study, conclusion and recommendations. This study explored the implementation of REDD+ in the Kakum Hotspot Intervention Area with focus on benefit sharing and rights of forest dependent communities. Specifically, the study sought to identify the factors that affects the equitable flow and distribution of benefits from REDD+ projects, identify how the implementation of REDD+ has affected the rights of forest dependents communities and to assess the state of REDD+ benefits sharing in the Kakum HIA.

The study is qualitative in nature and employed the exploratory study design. Data collection was done with interviews and focus group discussions. The interview and discussion questions covered various aspects of the objectives of the study. Purposive sampling was the sampling method used to sample 74 participants from the various communities engaged in the study. The data from interviews and focus group discussions were transcribed, coded, with emerging codes categorised into themes and sub-themes and analysed using thematic analysis.

Summary of Findings

At the end of the study, these were the main findings:

1. Participants of the study had appreciable knowledge of the REDD+ and its associated benefits describing it as efforts by the government to

preserve forests and have more trees planted through local communities in order to fight climate change.

2. Arrangements for the sharing of benefits from REDD+ activities in the Kakum HIA were not equitable, effective and efficient. This puts Ghana's efforts in forest governance in an unsecured state. In that local communities will not adhere to regulations to protect the forest if they feel disadvantaged in forest governance.
3. It was revealed that benefit sharing in the HIA was not equitable. Participation of local communities were more at the final implementation or activities of the programme but very low in the build up to these activities.
4. There are several injustices in the system that operates the implementation of REDD+ in the Kakum HIA. The factors that influenced benefits sharing are;

Limited resources, corruption and elite capture, government policies, selection of beneficiaries, low enforcement of arrangements and law and the inability of the Forestry Commission to reach some communities.
5. The implementation of REDD+ in the Kakum HIA has reduced the rights of local community members in various communities to access and use the protected forests within the landscape.

6. The implementation of REDD+ has strengthened rules on ownership of forests or the trees in the forest in the local communities as well as trees that grew on their farmlands.

7. There were no systems in place to monitor the sharing of benefits from REDD+ projects and activities, and this also served as a disincentive to participants of the programme in the HIA. Generally, these issues put the implementation and acceptance of REDD+ in the HIA and Ghana in jeopardy.

Conclusions

Ghana's current forest sector benefit sharing arrangements make considerations for all stakeholders in the activities but allocates most of the benefits to government institutions. Flow and sharing of benefits emerging from REDD+ was inequitable. The sharing was negatively influenced by injustices in the arrangement for sharing. The implementation of REDD+ with its projects has curtailed the rights of local community members with regard to the forest. Rights of local community members in the HIA to access the forests in the landscape have been limited. These local forest users are no longer allowed to enter the forest as they used to before the REDD+ programme. Again, the forest users are not allowed to use the forest and forest products in the Kakum HIA due to the implementation of the programme.

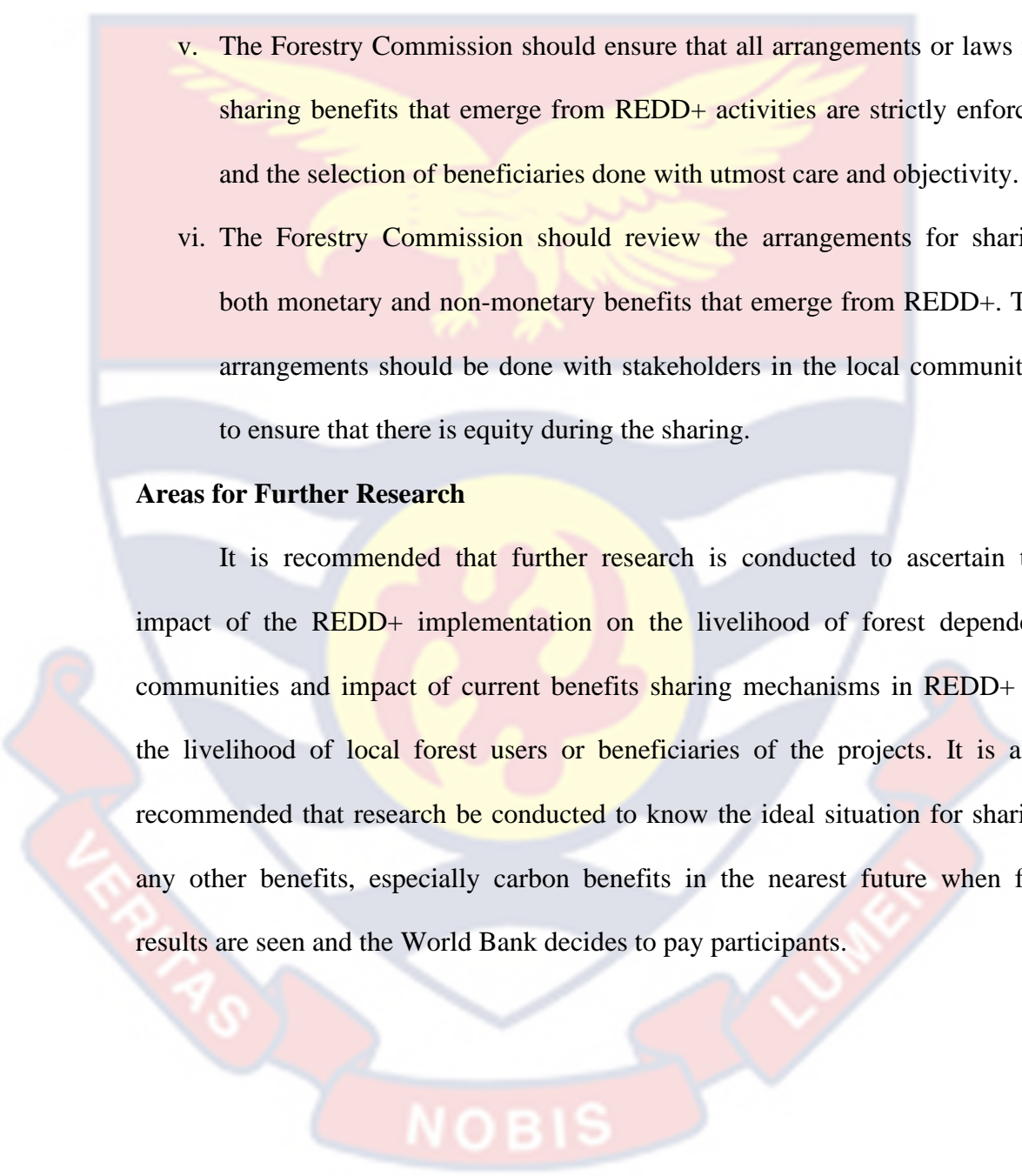
The arrangements for sharing of benefits in the Kakum HIA did not address the 3E's of appropriate benefit sharing mechanisms. Therefore, it can be concluded that REDD+ benefit sharing in the Kakum HIA is not equitable. The

arrangements and processes for sharing of benefits from REDD+ were not effective and efficient.

Recommendations

Based on the findings and conclusion of the study, the following recommendations are made for consideration.

- i. The Forestry Commission should enhance and promote research into benefit sharing, specifically on factors affecting equity and benefits received by the appropriate stakeholders in Forestry Commissions programmes, specifically REDD+, so that there will be enough data and information for further recommendations.
- ii. The government should equip the Forestry Commission offices in the Assin South District with enough resources to help in ensuring that there is equitable flow and share of benefits to participants. These resources include motors, bicycles and tricycles, personnel, enough seedlings and farm implements.
- iii. The government and headquarters of Forestry Commission should make efforts to probe further on corrupt activities associated with the sharing of benefits so that the people engaged in such activities can be disciplined. Strict measures should be in place to prevent officials or CREMA executives from selling seedlings meant to be given to participants of the programme for free.

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- The logo of the University of Cape Coast is a large, semi-transparent watermark in the background. It features a shield with a yellow eagle with spread wings at the top. Below the eagle is a yellow circle containing a red stylized figure. At the bottom of the shield is a red banner with the Latin motto 'VERITAS NOBIS LUMEN' in white capital letters.
- iv. The Forestry Commission should do well to make good use of available resources which include tricycles to reach communities that have beneficiaries to duly provide their benefits to them.
 - v. The Forestry Commission should ensure that all arrangements or laws for sharing benefits that emerge from REDD+ activities are strictly enforced and the selection of beneficiaries done with utmost care and objectivity.
 - vi. The Forestry Commission should review the arrangements for sharing both monetary and non-monetary benefits that emerge from REDD+. The arrangements should be done with stakeholders in the local communities to ensure that there is equity during the sharing.

Areas for Further Research

It is recommended that further research is conducted to ascertain the impact of the REDD+ implementation on the livelihood of forest dependent communities and impact of current benefits sharing mechanisms in REDD+ on the livelihood of local forest users or beneficiaries of the projects. It is also recommended that research be conducted to know the ideal situation for sharing any other benefits, especially carbon benefits in the nearest future when full results are seen and the World Bank decides to pay participants.

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APPENDIX A

INTERVIEW GUIDE FOR FARMERS AND TRADITIONAL**AUTHORITY**

This is an MPhil Research on benefits sharing in Reducing Emission from Deforestation and Forest Degradation (REDD+) and rights of forest dependent communities under REDD+ programmes and projects. The research examines the state of REDD+ benefit sharing, equitable flow and sharing of REDD+ benefits and the impact of REDD+ implementation on the rights of communities who depend on forests. We would be very grateful if you could provide answers to these questions in order to achieve the objectives of this research. Your responses would be treated confidential.

Section A: Background Information

- 2) Date and Location
- 3) Occupation
- 4) Gender
- 5) Status
- 6) Educational Background
- 7) What do you know about REDD+?
- 8) What are the REDD+ projects in this community?
- 9) What are the benefits in these REDD+ projects?

Section B: Flow and sharing of benefits in REDD+

- 10) What are the factors that affect the flow and sharing of benefits in REDD+?

11) Are there laws and arrangements for sharing of benefits? How are these laws enforced?

12) How are beneficiaries selected for benefit sharing in the REDD+ Projects?

13) Do you think that affects the flows of benefit sharing?

Section C: Impact of REDD+ implementation on access, ownership and use of forest

14) Has the implementation of REDD+ projects had any effects on your rights?

15) Since the implementation of REDD+ projects, are you allowed to own the forest, trees or lands in the forest?

16) Are you allowed to use the forest or the forest products?

17) How would you describe the accessibility to the forest by farmers and other members of the community?

Section D: The state of REDD+ Benefit Sharing in Ghana.

18) Are you a beneficiary in the sharing of REDD+ benefits?

19) Why and how were you selected?

20) Before being a part of the REDD+ projects are you informed of the benefits to be received if you take part in the projects?

21) Have you received any benefits from REDD+ projects due to any roles in forest management?

22) Have you incurred any cost (implementation, transaction and opportunity) due to REDD+ Projects?

23) In playing the role of a facilitator in the implementation of REDD+ projects, do you receive benefits?

24) Are you involved in the processes to establish a benefit sharing scheme or mechanism?

25) How would you describe the coordination among stakeholders in designing

and implementing benefit sharing mechanisms for REDD+?

26) How is monitoring of the projects and benefits shared done?

Thank you.



APPENDIX B

FOCUS GROUP DISCUSSION GUIDE FOR CSC FARMERS

This exercise is an MPhil Research on benefits sharing in Reducing Emission from Deforestation and Forest Degradation (REDD+) and rights of forest dependent communities under REDD+ programmes and projects. The research examines the state of REDD+ benefit sharing, equitable flow and sharing of REDD+ benefits and the impact of REDD+ implementation on the rights of communities who depend on forests. We would be very grateful if you could provide answers to these questions in order to achieve the objectives of this research. Your responses would be treated confidential.

Section A: Background Information and Knowledge

- 1) What do you know about REDD+?
- 2) What are the REDD+ projects in this community?
- 3) What are the benefits in these REDD+ projects?

Section B: Flow and sharing of benefits in REDD+

- 4) In your view what are the things that affect the flow and sharing of benefits in REDD+?
- 27) Are there laws and arrangements for sharing of benefits? How are these laws enforced?
- 28) How are beneficiaries selected for benefit sharing in the REDD+ Projects?
- 29) Do you think that affects the flows of benefit sharing?

Section C: Impact of REDD+ implementation on Access, Ownership and Use of Forest

- 5) Has the implementation of REDD+ projects had any effects on your rights as member of the community?
- 6) Since the implementation of REDD+ projects, are you allowed to own the forest, trees or lands in the forest?
- 7) How would you describe your accessibility to the forest?
- 8) Are you allowed to use the forest or the forest products?
- 9) How are you able to get firewood or game in the forest?

Section D: The state of REDD+ Benefit Sharing in Ghana.

- 10) Have you received any benefits from REDD+ projects due to any roles in forest management?
- 11) Do you receive any benefits from REDD+ projects due to any roles in forest protection?
- 12) Are you involved in the processes to establish a benefit sharing scheme or mechanism?
- 13) Have you received any benefits from REDD+ projects due to any roles in forest management?
- 14) Have you incurred any cost (implementation, transaction and opportunity) due to REDD+ Projects?
- 15) In playing the role of a facilitator in the implementation of REDD+ projects, do you receive benefits?

16) Are you involved in the processes to establish a benefit sharing scheme or mechanism?

17) How would you describe the coordination among stakeholders in designing

and implementing benefit sharing mechanisms for REDD+?

18) How is the benefit sharing monitored?

Thank you



APPENDIX C

INTERVIEW GUIDE FOR FORESTRY COMMISSION AND DISTRICT**ASSEMBLY MEMBERS**

This exercise is an MPhil Research on benefits sharing in Reducing Emission from Deforestation and Forest Degradation (REDD+) and rights of forest dependent communities under REDD+ programmes and projects. The research examines the state of REDD+ benefit sharing, equitable flow and sharing of REDD+ benefits and the impact of REDD+ implementation on the rights of communities who depend on forests. We would be very grateful if you could provide answers to these questions in order to achieve the objectives of this research. Your responses would be treated confidential.

Section A: Background Information

- 1) Occupation
- 2) Gender
- 3) Age
- 4) Status
- 5) Educational Background
- 6) Date and Location
- 7) What projects are being/have been implemented as part of the Ghana REDD+ programme? Explain the implementation.
- 8) Are there specific Climate Smart Cocoa projects in these communities?
- 9) What are the objectives of these projects?
- 10) What are the benefits in these REDD+ projects? Beneficiaries;

- People
- Environment
- Climate

Section B: Flow and sharing of benefits in REDD+

11) In your view, how do the following factors affect sharing of benefits

- Limited Resources ?
- Weak Law Enforcement
- Reaching forest communities.
- Corruption

12) In the distribution of REDD+ benefits, are you able to reach the forest communities engaged in the REDD+ projects?

13) What happens to the communities you are not able to reach?

14) How are the flow and sharing of resources or benefits from REDD+ projects monitored?

15) Are different governmental policies affecting the sharing of benefits?

16) If yes, how are they affecting the sharing of benefits?

17) What are the resources needed to ensure successful benefit sharing?

18) Are such resources available?

19) Does that in any way affect the sharing of REDD+ benefits? How?

Section C: Impact of REDD+ implementation on access, ownership and use of forest

20) What restrictions are put on the forests when being preserved through REDD+ projects?

21) When there are ongoing REDD+ projects are people/community members allowed to have access to the forests? Yes or No. Why?

22) Are people allowed to use the forests when REDD+ projects are ongoing? 1. Yes 2. No. Why?

23) When there are ongoing REDD+ projects are people/community members allowed to own trees, the forest or forests products? 1. Yes 2. No. Why?

24) How are people with legally recognized rights treated in terms of access and use of the forests?

Section D: The state of REDD+ Benefit Sharing in Ghana.

25) Who formulates or design the mechanism or arrangements for the sharing of benefits in REDD+?

26) Are the local communities involved in the process for designing Benefit sharing mechanisms?

27) How is the involvement of local communities done?

28) Briefly explain the selection process for beneficiaries in REDD+ projects? / Briefly explain how the selection process for beneficiaries in REDD+ projects will be?

29) How different are the benefits received by people directly involved in Carbon Sequestration from those indirectly involved? / How different will the benefits received by people directly involved in Carbon Sequestration be from those indirectly involved?

30) Do you think the sharing of benefit leads to low transaction costs? / Do you think the sharing of benefit will lead to low transaction costs? How?

31) Who monitors the sharing of REDD+ benefits? / Who will be monitoring the sharing of REDD+ benefits?

32) How is the sharing of benefits in REDD+ monitored? / How will the sharing of benefits in REDD+ monitored?

33) What are your recommendations to improve the state of REDD+ benefit sharing?

Thank you.



APPENDIX D

UNIVERSITY OF CAPE COAST
COLLEGE OF HUMANITIES & LEGAL STUDIES
SCHOOL FOR DEVELOPMENT STUDIES
DEAN'S OFFICE

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Post Office Box 01
University of Cape Coast
Cape Coast

Our Ref: SDS/IL/Vol.5/62

Date: 23rd September, 2021

Your Ref:

The Chairperson
Institutional Review Board
University of Cape Coast
Cape Coast

Dear Sir/Madam,

APPLICATION FOR ETHICAL CLEARANCE

The bearer of this letter, Mr. Eric Adjei with student registration number SD/DSP/19/0004, is a Master of Philosophy (Peace and Development Studies) student of the above School. I support his application for ethical clearance from your outfit.

He is conducting a study on the topic; **“The Political Economy of REDD+ in Ghana: Impact on Benefit Sharing and Rights of Forest Dependent Communities in the Kakum Hotspot Intervention Area”** as part of the requirements for obtaining an MPhil Degree in Peace and Development Studies at the University of Cape Coast.

I shall be grateful if he is given the necessary assistance to enable him commence data collection.

Thank you.

Yours faithfully,


Dr. E. Y. Tenkorang
SUPERVISOR

APPENDIX E

UNIVERSITY OF CAPE COAST
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POST OFFICE BOX 01
UNIVERSITY OF CAPE COAST
CAPE COAST

Our Ref: DIDS/MPhil/ Vol.1/083

23rd September, 2021

Your Ref:

The Chairman
Institutional Review Board
University of Cape Coast

Dear Sir,

ETHICAL CLEARANCE FOR CONDUCT OF RESEARCH: ERIC AGJEI

We write to introduce Mr. Eric Adjei, a Master of Philosophy student at the Department of Integrated Development Studies, School for Development Studies. Mr. Adjei requires ethical clearance to proceed with his data collection for the thesis titled, "**The Political Economy of Redd+ in Ghana: Impact on Benefit Sharing and Rights of Forest Dependent Communities in the Kakum Hotspot Intervention Area**".

We confirm that the Department has approved Mr. Adjei's proposal and has granted him permission to conduct and complete his thesis as part of the requirements to obtain his Master's degree.

We would therefore be grateful if his thesis proposal could be reviewed to enable him carry out the research.

Thank you.

Yours faithfully,

Handwritten signature of Frederick Koomson in blue ink.

Frederick Koomson (PhD)
HEAD

APPENDIX F

INTERVIEW WITH Farmer (9) in ASSIN KURUWA (2)

Section A: Background Information

- 1) Date and Location

25th May, 2022/ Assin Kuruwa

- 2) Occupation

Farmer

- 3) Educational Background

Primary

- 4) What do you know about REDD+?

It is the CREMA we have in this community. They come around with the forestry commission officials to train farmers on best agricultural practices that will help us getting the rains and sunshine when we need them.

- 5) What are the REDD+ projects and Activities in this community?

Just like I said farmers in the community are mostly trained by the forestry commission people on how we can have so much yield but not destroying the forests or trees in our farms. Some Non Governemntal Organizations also come around to train us on what should be done our farms.

We also embark on projects to plant trees in our forests and on our farmlands every year while whiles reducing the rate at which we cut down trees in our forests and farms.

6) What are the benefits in these REDD+ projects?

For me they give me fertilizers and tools that will help me in my farm to gain so much yields than the previous years. They also provide me with seedlings, both cocoa and timber species to be planted on my farmland. Those seedlings given out, I do not pay a penny for them.

Section B: Equitable flow and sharing of benefits in REDD+

7) What are the factors that affect the equitable flow and sharing of benefits in REDD+?

My problem about how they share the items to is that it is always not enough. Last time when they came to check things with us, I saw that I was supposed to receive 50 seedlings, but when they came around to share them, can you believe that I only received 26? I do not understand and my question is what happened to the rest.

8) Are the laws? Are they enforced?

This one I think the CREMA people can really answer to that because for me they just call us and we go there to take what they have for us.

9) How are beneficiaries selected for benefit sharing in the REDD+ Projects?

They ask us to write our names if we are interested in planting trees in our farmlands and then they go with us to farms to check the size and what we deserve. They will do all these but will not give you what they you deserve per your efforts in the projects.

10) Do you think that affects the flows of equitable benefit sharing?

How they select does not affect the sharing of the benefits.

Section C: Impact of REDD+ implementation on access, ownership and use of forest

11) Has the implementation of REDD+ projects had any effects on your rights?

Yes please. The community does not have total control over the forest and its resources. When we need something from them we make sure the forestry commission people are aware. We cannot cut the trees for other purposes like we used to do. as for the forest used for the National Park, nobody is allowed to go there.

12) Since the implementation of REDD+ projects, are you allowed to own the forest, trees or lands in the forest?

No one has the right to own the trees in the forest, neither can you own the lands in the forest. But truth is that these restrictions were places earlier when government took control over the forests but the REDD+ has made it more intense on the restrictions.

13) Are you allowed to use the forest or the forest products?

It is difficult to use the forest itself, like the trees but for non-timber forest products we are given the chance to use them.

14) How would you describe the accessibility to the forest by farmers and other members of the community?

In fact, we cannot go into the National Park, last time I heard someone went there for herbs and the wildlife people beat him inside the forest and brought him back. If it is the other reserves, then we can seek for permission and use the place.

Section D: The state of REDD+ Benefit Sharing in Ghana.

15) Are you a beneficiary in the sharing of REDD+ benefits?

Yes please

16) Why and how were you selected?

They selected me because I am a farmer and I have been a part of the REDD+ programme since they started.

17) Before being a part of the REDD+ projects are you informed of the benefits to be received if you take part in the projects?

I remember when they wanted to start the projects, they called all our people here to a meeting to give us information on the programme as designed by Forestry commission.

18) Have you received any benefits from REDD+ projects due to any roles in forest management?

Since they started, I have only received fertilizers, cutlasses and seedlings, and the money they give after buying my Ote fruits. Apart from that nothing else has been given.

19) Have you incurred any cost (implementation, transaction and opportunity) due to REDD+ Projects?

The cost I can talk about is the fact that because we are protecting the forests, the animals in these forests usually come to my farm to destroy my crops because my farm is close the reserved forest.

20) In playing the role of a facilitator in the implementation of REDD+ projects, do you receive benefits?

No please. It is just what I have already told you.

21) Are you involved in the processes to establish a benefit sharing scheme or mechanism?

No please. We are only called to come and receive the benefits when they come.

22) How would you describe the coordination among stakeholders in designing and implementing benefit sharing mechanisms for REDD+?

For me I think the forestry commission people are not really close to us. They are close to the CREMA executives but not directly to us the farmers. Sometimes I feel the CREMA executives hide somethings from us.

23) Monitoring System

We have never seen anyone or people coming around to ensure we got what we deserve.



APPENDIX G

FOCUS GROUP DISCUSSION WITH FARMERS IN ASSIN AMPENKRO**(A)****Section A: Background Information and Knowledge on REDD+**

1) What do you know about REDD+?

1: They help us to protect trees and water bodies so that the changes in climate can be reduced.

4: What I know is on the Ote, that is if we leave such trees in our farmers we can have financial benefits from it.

2) What are the REDD+ projects and Activities in this community?

2: They told us if we want to have our cocoa farms lasting longer for us and our children, then we should leave trees or plant new trees in our farms. We should not cut them down and there will be a time if we grow, lets say 50 trees, about 10 of them could be owned by us.

6: We are also taught not to clear lands or bush very close to our water bodies. We should leave the trees at the banks of the rivers. Again, we are also taught to keep our water bodies very clean for our own safety.

4: It is the Cocoa and Palm tree farming that are very relevant to us as farmers in this community.

8: They bring us tree seedlings to be planted in our farms. It is just that they keep them for long so sometimes they are not able to grow but die off.

3) What are the benefits in these REDD+ projects?

8: Just like we said, because of the project they bring to us trees to be planted and we can have the right to own trees and use them to our own good if we nurture them very well.

1: It also helps us to improve in our Cocoa farming. That is, the trainings and teachings we go thorough help us to get to get our yields increased.

5: The trees also protect us from heavy rains and storms that have the potential to destroy our farms and buildings.

2: *We also receive farming tools and equipment from them to help us in the project's activities.*

Section B: Equitable flow and sharing of benefits in REDD+

4) What are the factors that affect the equitable flow and sharing of benefits in REDD+?

1: *In the sharing of the Seedlings, they measure your cleared land before giving you the seedlings, so incase you have traveled and you have not cleared your land, they will not give you some. So they cannot walk through the bush to measure.*

3: *Number of trees given out is not enough.*

6: *Sometimes the periods they give them to us are also not good and so if they are not able to stand, they will not give you seedlings again.*

5: *Not all farmers are literates and so when there is so much documentation in a formal way, such people do not get their portion. The elites in the communities take all the benefit sinCe they feel they fought for such benefits.*

4: *The community is a big one and so sometimes they only bring 30 seedlings to us. When that happens a lot of farmers do not get some and they start insulting us.*

8: *What I can say is that mostly the people that lead the registration changes at the point these benefits are going to be distributed. During registration community members are used in that but our people are never involved when the benefits are being shared.*

2: *Sometimes the officers can keep your receipts and ask for money before they are released to us for the seedlings.*

5) Are there laws and arrangements for sharing of benefits? How are these laws enforced?

2: *There are laws and arrangements for some of the benefits they share not all. All we know is that they ask us to come for the benefits and we go there to form queues.*

1: *Some of the arrangements are that clear your land so they measure to know how many should be given too you. They enforce these laws.*

6) How are beneficiaries selected for benefit sharing in the REDD+ Projects?

1: They call us all to assemble here and so when you come, they will write your name or register you and ask how many you need or inform you of the number of seedlings you will get.

7) Do you think that affects the flows of equitable benefit sharing?

8: I think since you were called to register and you showed up to do that, your name will sure be there when they are sharing anything. So I believe helps in the sharing but little problems.

5: Sometimes some few people are selected to be given free spraying but we do not know how these ones get selected.

Section C: Impact of REDD+ implementation on access, ownership and use of forest

8) Has the implementation of REDD+ projects had any effects on your rights?

3: Yes the programmes have had so much effects on our opportunities to have anything in the forest.

6: At first people were able to go to the forest to get things but we are not allowed anything like that again.

9) Since the implementation of REDD+ projects, are you allowed to own the forest, trees or lands in the forest?

2: For now the reserve is in the hands of the government and so nobody is allowed to own anything in the forest.

10) Are you allowed to use the forest or the forest products?

3: At first we were able to go into the forest to pick snails and even herbs for medicinal purposes but that right has been taken away from us since it the government started protecting it.

6: it is difficult to go and use things within the forest but if we are able to get permission from the Wildlife people then we are allowed to use some of the Non Timber Forest Products there.

11) How would you describe the accessibility to the forest by farmers and other members of the community?

1: There game people guarding the forest and so we are not allowed to enter the forest. if you do enter the forest and you are caught by the guards you will be punished.

2: Since we are not giving accessibility into the forest, that is why the government gave out some benefits to us but those of us in Assin Ampenkro never got our share in that token. When that was given they got into the hands of the traditional leaders in Assin Kuruwa and they sat on it.

Section D: The state of REDD+ Benefit Sharing in Ghana.

12) Are you a beneficiary in the sharing of REDD+ benefits?

1: Yes we are all beneficiaries.

13) Why and how were you selected?

2: Because we are all farmers.

7: Because we are all part of the REDD+ programme.

4: Because I also registered when they came to ask us the first time.

14) Before being a part of the REDD+ projects are you informed of the benefits to be received if you take part in the projects?

2: Yes they came to us to discuss with us. Even a white woman came to sit with us and discussed something like that.

8: Some of us did not see anything like that going on in this community. But I think the people selected to represent us as CREMA executives were informed of the benefits, just that they do not usually report to us.

15) Have you received any benefits from REDD+ projects due to any roles in forest management?

2: For us we have not received anything in the management and protection of the forest. We are very disappointed in the government.

5: These measures have really brought a lot hardship in our community.

16) Have you incurred any cost (implementation, transaction and opportunity) due to REDD+ Projects?

3: *The Agriculture officers who come around to help us in measuring farms and distributing seedlings we sometimes feed them or give them something.*

6: *We also incur cost in transporting the seedlings to our best location or farms.*

17) In playing the role of a facilitator in the implementation of REDD+ projects, do you receive benefits?

1: *As facilitators we know it is volunteerism work but sometimes we are given money for transportation and as motivation.*

18) Are you involved in the processes to establish a benefit sharing scheme or mechanism?

2: *We have not been involved in how benefit sharing should be done in this community.*

19) How would you describe the coordination among stakeholders in designing and implementing benefit sharing mechanisms for REDD+?

5: *There is a good coordination among us with the forestry commission and cocobod. They call on us to discuss issues.*

20) Monitoring System

6: *We have never seen anyone or people coming around to ensure we got what we deserve.*

RECOMMENDATION

How Benefit Should be shared when received?

2: *Farmers should receive a greater portion of the total benefit. Percentage wise 60% should go to the farmer, because the farmer might even be sharing with the land owner. Ten percent to the district assembly, 10% to the chiefs and 20% to the community.*

5: *Not all farmers are literates and so when there is so much documentation in a formal way, such people do not get their portion. The elites in the communities take all the benefit sicne they feel they fought for such benefits. Therefore they should be a system that will cater for the illiterates in the communities.*

1: When there are benefits to be shared, all traditional authorities or leaders in all the communities in the CREMA or SUB-HIA should be called not just one community.



APPENDIX H

INTERVIEW WITH ASSIN AMPENKRO CHIEF (A1)**Section A: Background Information**

24) Date and Location

20th May, 2022/ Assin Ampenkro

25) Gender: Male

26) Age: 45 years

27) Occupation

Farmer

28) Status

Chief

29) Educational Background

Tertiary

30) What do you know about REDD+?

REDD+ has made us to know that we should protect our trees and water bodies. Due to that our people and farmers have been trained in doing that to help in fighting the changes in climate.

31) What are the REDD+ projects and Activities in this community?

We are thought how to better our cocoa farming in the community and also made to plant trees in these farms of ours.

They call us and training us on how to nurture the trees in our farms and how to cultivate coca to have enough yield at the end of the year.

32) What are the benefits in these REDD+ projects?

There are a number of benefits in these projects. I know our farmers get cocoa seedlings for free to be planted in the farms.

Again, we get tree seedlings to be planted in our farms and we the trees we are planting are our own.

Section B: Equitable flow and sharing of benefits in REDD+

33) What are the factors that affect the equitable flow and sharing of benefits in REDD+?

Most at times the seedlings to be shared to us are not enough for my people in the community.

Again how to transport the seedlings or the nursery to our farms also become a problem.

34) Are the laws? Are they enforced?

There are laws and arrangements for the sharing of these benefits and they try to enforce or follow the arrangements.

35) How are beneficiaries selected for benefit sharing in the REDD+ Projects?

The REDD+ group made us know they have formed CREMA and we have selected people from here to represent us there.

Sometimes they inform the traditional authorities and we inform our people of their coming to share.

36) Do you think that affects the flows of equitable benefit sharing?

Not exactly, but the people who come to do the writing of names are totally different from those who come to share the benefits.

If forestry commission officials are sharing the benefits it will help so they should always be the ones to write our names but we prefer our CREMA executives to do the writing of names and sharing of the benefits.

Section C: Impact of REDD+ implementation on access, ownership and use of forest

37) Has the implementation of REDD+ projects had any effects on your rights?

Yes please. Currently we do not have any rights to the forests closer to this community but that was before the introduction of REDD+ and trees in our own farms have been taken away from us.

38) Since the implementation of REDD+ projects, are you allowed to own the forest, trees or lands in the forest?

Even before REDD+ was introduced we were not allowed to enter the forest reserved as a National Park since the government has taken control over it. The implementation of REDD+ has made ownership in other forest reserves around our community difficult. Trees in our farms cannot be cut down easily without permit from the Forestry Commission.

39) Are you allowed to use the forest or the forest products?

There are herbs in the forest that can cure several diseases but we are not able to get them for such usage.

40) How would you describe the accessibility to the forest by farmers and other members of the community?

We do not have any access to the Forest for years now and the introduction of REDD+ has made it more intense.

Section D: The state of REDD+ Benefit Sharing in Ghana.

41) Are you a beneficiary in the sharing of REDD+ benefits?

Yes, but only because I am farmer but not because I am a traditional authority.

42) Why and how were you selected?

As I said it is because I am also a farmer. They wrote our names and send to their office then they came to share the benefits with those names.

43) Before being a part of the REDD+ projects are you informed of the benefits to be received if you take part in the projects?

Yes they call us all traditional authorities together with the community members to inform us about the projects and some of us were ready to join because they promised it will help to increase our yields. The only thing is what exactly will be received is not told to us but we are given a general overview. Sometimes when the exact benefits are communicated to us it will be enough motivation to join or to continue being a part of the programme.

44) Have you received any benefits from REDD+ projects due to any roles in forest management?

Since they started the projects we have not received anything in the management and protection of the forest.

45) Have you incurred any cost (implementation, transaction and opportunity) due to REDD+ Projects?

The cost I can talk about is opportunity cost in giving stool lands for the nursery of trees and cocoa seedlings.

Also sometimes we hear the benefits are being shared in other towns and our people will have to travel to these communities.

46) In playing the role of a facilitator in the implementation of REDD+ projects, do you receive benefits?

We do our best in supporting and protecting the forest. We have even set up volunteer groups in this community for the purpose of protecting the forest but the truth is we have not received anything in the projects as facilitators or the due to the roles played in protecting the forest.

47) Are you involved in the processes to establish a benefit sharing scheme or mechanism?

No please we are only informed of the dates for sharing but not exactly how the sharing should be done.

48) How would you describe the coordination among stakeholders in designing and implementing benefit sharing mechanisms for REDD+?

Interaction with us by other stakeholders is considered satisfactory. The CREMA executives are closer to us than the forestry commission officials.

49) Monitoring System

We have never seen anyone or people coming around to ensure we got what we deserve.

RECOMMENDATION

How Benefit be shared when received?

When there are any benefits all traditional authorities from all communities in the CREMA should be called and informed.

The seedlings given out to our farmers should also be enough for all our people.

APPENDIX I

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

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YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

10TH MAY, 2022

Mr. Eric Adjei
Department of Integrated Development Studies
University of Cape Coast

Dear Mr. Adjei,
ETHICAL CLEARANCE – ID (UCCIRB/CHLS/2021/80)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted Provisional Approval for the implementation of your research **The Political Economy of REDD+ in Ghana: Impact on Benefit Sharing and Rights of Forest Dependent Communities in the Kakum Hotspot Intervention Area**. This approval is valid from 10th May, 2022 to 9th May, 2023. You may apply for a renewal subject to submission of all the required documents that will be prescribed by the UCCIRB.

Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

Samuel Asiedu Owusu, PhD
UCCIRB Administrator

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST