

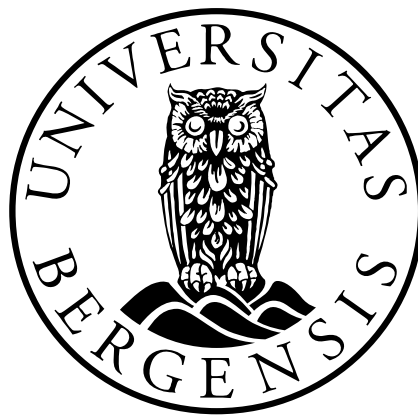
MECHANISMS AND MANEUVERS OF FOREST RESOURCE ACCESS AND ITS IMPLICATIONS FOR RURAL LIVELIHOODS IN THE HIGH FOREST ZONE OF GHANA



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DEDICATION

To the best mum in the whole wide world, Madam Gifty Deimor Glover, I say God bless you mum. To my dad, Mr. Bernard Glover Tetteh, I love you dad.

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I thank you Yahweh for being my succorer.

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Abstract

The management of Ghana's Forests has attracted diverse social actors with multiple interests from the state (Forestry Commission, FC) to local level (local forest users). This has resulted in processes and mechanisms within and outside the legal system of gaining access to the forests and related resources. Mechanisms within the legal system include the forest governance policies which necessitates gaining access through a permit from the FC. The bureaucratic and sometimes frustrating nature of the permit system has served as a springboard for certain social actors such as farmers and chainsaw operators, to put up crafty ways of accessing and benefitting from the forests. This crafty ways is what I refer to as manoeuvrings in this study; which are occurring as a result of the emergence and continuance of the forest governance policies. This suggests that regulations and policies are not always a panacea for sustainable forest governance. With this background and using qualitative research methods and techniques, this study examined how local forests users are able to manoeuvre forest resource access. To achieve this, a field study of a period of three months was undertaken in Ghana.

The study drew on the Political Ecology Approach (Bryant and Bailey, 1997), the Theory of Access (Ribot and Peluso, 2003) and the Entitlement Approach by Leach et al., (1999) to achieve the research objectives. Taking the Political Ecology Approach, this study found that benefitting from the forests reflects the interests of both the forestry officials and the local forest users. Furthermore, the forestry officials and the local forest users are characterized by unequal power relation. That is the forestry officials are the real determinants of who gains access and who loses out on access in relation to the forests resources. Using the Theory of Access, the local forest users in order to meet their interests by benefitting from the forests, enter into social relationships with the forestry officials to manoeuvre forest resource access. By investing in these social relationships, the local forest users are able to negotiate, manipulate and bribe the forestry officials to grant them access to the forests. Further, by drawing on the Entitlements Approach, this study found that informal institutions carried more weight than the formal institutions in manoeuvring forest resource access by the local forest users. That is the local forest users invested in social networks and relied more on the agreements, negotiations and arrangements between themselves and the forestry officials to manoeuvre forest resource access and to benefit from the forests.

The study concludes that, the structures of the Forestry Commission be strengthened well enough to ensure the sustainable management of the forests. Further, better schemes must be put in place to enable the participation of local forest users in the sustainable management of the forests.

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Abbreviations

FC: Forestry Commission

LFU: Local Forest Users

CHO: Chainsaw Operators

FF: Forest Farmers

FG: Forest Guards

TOs: Technical Officers

NTFPs: Non Timber Forest Products

FLEGT: Forest Law Enforcement, Governance and Trade

REDD+: Reducing Emissions from Deforestation and Degradation

NREG: Natural Resource and Environment Governance

VPA: Voluntary Partnership Agreement

MLNR: Ministry of Lands and Natural Resources

WCED: World Conference on Environment and Development

NGOs: Non-Governmental Organizations

FSD: Forest Service Division

TIDD: Timber Industry Development Division

RMSC: Resource Management Resource Center

FD: Forestry Department

HFZ: High Forest Zone

ITTO: International Timber Organization

Chapter 1

Introduction

“Forests though physically remote, are not isolated from the overall local and global economy” (Food and Agriculture Organization, 2011). The importance of forests to many African countries cannot be gainsaid. The economy of many African countries depends on forest resources and also on crops grown especially in converted forests such as cocoa, coffee and oil palm. Forests are the major sources of timber in Africa. These timber products when harvested, creates employment and further contributes to the Gross Domestic Product (GDP) of many African countries. For instance in Ghana, according to Marfo (2010), the formal timber industry contributes about 6% to the Gross Domestic Product (GDP) and about 11% to Ghana’s export earnings. Forests also have recreational and spiritual value for many people alike. Further, many people depend on the forests for their livelihoods and also for medicinal purposes. The importance of forests is also seen in its ability to protect watersheds and rivers from dry conditions generated by exposure to the scorching sun. Further, with the ever increasing focus and attention on climate change and its perceived effects, forests have become vital even as carbon sinks.

The benefits from the forests have attracted diverse social actors with plurality of interest ranging from the global to the local levels. For instance in Ghana many social actors including forestry officials from the state, timber companies, chiefs, forest communities and farmers, etc. have diverse interests in the forests.

Ghana has put in place many strategies, plans and policies with help from the international community, for the sustainable management of forests. Further, forest communities also put in place their own plans and tactics to make sure that the benefits from the forests accrues to them.

The interests and strategies between and among the diverse social actors including the state, the forestry commission¹, forestry officials, farmers, chainsaw operators sometimes lead to conflicts or cooperation in relation to forest access and management. Therefore avoiding forest user conflicts and ensuring the sustainable management of the forest even for future

¹The Forestry Commission of Ghana is responsible for the regulation and utilization of forest and wildlife resources, the conservation and management of those resources and the coordination of policies related to them.

generations is a matter of priority in Ghana. Forestry officials and policy makers from the Ghanaian government have put up structures and plans which are being implemented through the Forestry Commission to protect and manage the forests for the benefit of all. But in their quest and eagerness in managing and protecting the forests, have created some gaps for other social actors to utilize. That is the structures that have been put in place are most times not strong enough to ensure the sustainable management of the forests. This suggests further that, strong regulations do not always guarantee success or achieve their intended aim. This inefficiencies in the structures, provides spaces for other actors such as farmers and chainsaw operators to put in place their own strategies, plans and schemes in accessing and benefitting from the forests. These strategies and tactics that are being put up by the farmers and chainsaw operators to access and benefit from the forests is what I refer to as manoeuvrings in this study. This thesis brings to the fore maneuvering tactics, the different actors with multiple interests and the strategies they put up in benefitting from the forests in Ghana. This thesis explored the mechanisms and processes that actors use to gain access to the forests in Ghana outside the legal permit system by the state. The work seeks to show how the forest governance policies haven't been that successful with respect to using the permit system as a way of accessing and benefitting from the forests in Ghana.

1.1 Problem Statement

Forest management, forest access and control are issues very high on the development agenda of the government of Ghana. The government together with international donors is undertaking several initiatives to strengthen the forest management processes. Examples include the Forest Law Enforcement, Governance and Trade (FLEGT), the Ghana Natural Resources and Environment Governance (NREG) Review, The Voluntary Partnership Agreement (VPA) with the European Union to combat illegal logging and to strengthen forest governance, and the Reducing Emissions from Deforestation and Degradation Plus (REDD+). These initiatives underscore the importance of forest resources to the Ghanaian government and local people as well. The Forest Commission (FC) of Ghana is responsible for the management of the forests. As part of its plans in achieving sustainable forest management, the FC has put in place a legally accepted means (permits) of accessing the forests by all actors interested in benefitting from the forests. To further enhance and achieve its mandate, forest guards have been stationed in forest communities to monitor, protect and to report any 'illegal' activities done in the forests to the forestry commission. As a point of

entry and to contribute to the existing literature on sustainable management of forests, this study examines how, irrespective of the initiatives of the international community, the government of Ghana, the FC, and the forest guards, local forest users are able to manoeuvre, access and to benefit from these same forests that are being governed by the FC.

The study examines the mechanisms and manoeuvres of forest resource access in the high forest zone of Ghana. Specifically the study identifies and examines the processes of forest resource access by local forest users outside the permit system. The study further addresses how institutions (formal and informal), mediate access to and control over forest resources in order to analyze why and how the forest governance policies in Ghana has created manoeuvring spaces for other actors to exploit. Issues such as unequal power relation and how they circumscribe actor interactions between forestry officials and local forest users and how and why this leads to conflicts or cooperation in relation to the forests resource access will be examined. The role that forest resources play in the livelihoods of local people will also be discussed.

This study seeks to make a valuable contribution to inform effective policies in ensuring forest management and livelihood improvements. A good overview of knowledge on the politics, strategies and interests that surrounds forest resource access and control is vital for formulating policies for sustainable forest management to the benefit all.

Further it is relevant for policy makers to understand the processes of forest resource access at the local level, the power relations, institutions and actor interactions involved in gaining access and benefitting from forest resources. This will enable them to formulate relevant policies that bring benefits to the state, the forests and local forest users at large.

1.2 Research question

What are the mechanisms of forest users to achieve resource access and what are the implications on rural livelihoods?

The specific research questions include

- What are the processes of forest resources access?
- Who grants the access, who gains and who loses out and why?
- Why do forest user conflicts arise and how are they resolved?
- What is the importance of forest access on rural livelihoods?

1.3 The study Area

The study was undertaken in the high forest zone of Ghana. It's an area of about 7.5 million hectares. It's a zone where most of Ghana's forests are found. It is further characterized by politics of resources access and control. Further within this zone most conflicts and illegalities occur with regards to the use and management of forest and tree resources

1.3.1 Context of the study area

Bepposso² is a forest community with a forest reserve, which is located in the high forest zone of Ghana. The forest reserve is almost depleted and as such can be seen as among the degraded forest reserves in the high forest zone of Ghana. As at the time of this study, the population at Bepposso was about 1000 people. I got to know this number from the assembly man who gave me the results of the 2012 general elections in the area.

1.3.2 Land issues in Bepposso

The land by definition belongs to the Akyems who are the natives of the land, but is occupied by other tribes such as the Krobos, the Ewes. The area is dominated mostly by the Krobos of the Ga-Adangbe stock. The Odikro and the Dademantse has been appointed by the local community and endorsed by the paramount chief as caretakers of Bepposso. This presupposes that access rights to lands in the community reside solely with the Paramount Chief who is the overseer of the whole community. The Odikro and the Dademantse are responsible for the local administration of Bepposso, but are restricted when it comes to granting access to lands except lands that they have bought themselves.

1.3.3 Farming and social amenities in Bepposso

Bepposso is a farming community. The peasant farmers here produce a diversity of annual crops including plantain, cocoyam, maize and cassava. The farming system practiced in Bepposso is known locally as the 'do ma yen nky3'. This is a sharecropping system, where landowners give out their lands to farmers to farm it for a period. When the produce or yields

² Bepposso: This is the substitute for the real name of the study area being used for this study. This is used in order to protect the identity of the informants, due to the sensitive nature of the information they have provided.

is ready, the landowner is entitled to one third while the farmer takes two thirds. This farming system has to a large extent encouraged many farmers to gain access to lands in the forests to farm. This is due to the fact that when the produce is ready, they don't have to share with anyone. Typical of many rural roads in Ghana, the road in Bepposso is mostly dry and dusty during the dry season and wet, slippery and almost unmotorable during the rainy season. The community has access to electricity and five drilled boreholes as sources of drinking water. The community has one government basic public school and two private owned public schools. Bepposso further has a community health center which mostly handles first aid situations. The health center further provides ante natal care and house to house education on malaria and sexually transmitted diseases.

1.3.4 Bepposso and the Forest Reserve

To improve the condition of the forest reserve in Bepposso, the Forest Commission adopted the Tuangya Farming system in the area. Farmers under this system were allowed to form groups and were given lands in the forests to plant foodcrops together with trees. This system according to Kele a forest guards "failed to an extent, because the farmers were using it to advance their interests and were not planting the trees" (Source: Fieldwork, 2014). The system was officially stopped in the whole country in 1987 (Owusu et al., 1989). The system was introduced back with a new name the 'Modified Tuangya System' (Boakye and Baffoe, 2008). The only addition to the new system was its emphasis on the entitlement of benefits in the form of money to the farmers who planted such trees. Relying on this system, some farmers are still conniving with the forest guards to extract forests resources and to farm inside the forests.

The famine crises that occurred in Ghana in the early 1980's is one major event that has affected the use of lands in the community. Local farmers in order to satisfy their livelihood interests during the 1980's moved to capitalize new lands in the forests which were under protection by the FC. The ability of these categories of farmers to gain access during these periods has encouraged them to maintain such access or lands irrespective of the resistances they face from forestry officials.

The activities of chainsaw operators are very rampant in the Bepposso. Forest user conflicts between forestry officials were also kind of an everyday happening in the community.

The presence of a forest reserve, the presence of chainsaw operators and the forest farmers and the forestry officials interacting in relation to the forests makes Bepposso a suitable forest community for this study

1.4 Organization of the Study

This thesis is organized into 9 chapters. Chapter 1 consists of the introduction, problem statement, research questions, the study area and the organization of the study. Chapter 2 explores the theoretical underpinnings on which this work is based. The methods, plans and procedures that went into producing and analyzing the data are examined in chapter 3. Forests, actors and forestry institutions in Ghana are explored in chapter 4. Chapter 5 then explores how the emergence of forest policies in Ghana has set the stage for the mechanisms of forest resource access. Chapters 6&7 present the findings and these findings are discussed in light of the theories used for the study in Chapter 8. The summary of the findings and the conclusions made from the study are then presented in Chapter 9.

Chapter 2

Theoretical perspectives

This chapter explores the theories used to answer the research questions. The theoretical perspectives used are the Political Ecology Approach, the Access Theory and the Entitlements Approach. The political Ecology is used to explore the plurality of interests of diverse actors, the politics and unequal power relations that surrounds forest resource access. The Access Theory is drawn upon to analyze the benefits and the mechanisms that the diverse actors use to maneuver forest resource access. Lastly the Entitlements approach is used to explore the mediating role of institutions in relation to forest resource access and control.

3.1 The Political Ecology Approach

The high value attached to forests and its resources attracts multiple interests from diverse actors ranging from the local, national and to the international levels. This suggests that, ‘understanding human-environment relations demands an analysis of the interests and the politics that surrounds resource access and use’ (Bryant, 1998). One aspect of political ecology, which is the actor oriented approach, emphasizes the need to focus on the “interests, characteristics and actions of different types of actors in understanding political-ecological conflicts” (Bryant and Bailey, 1997). The actor oriented approach therefore relates an understanding of actors to political and ecological processes. According to Bryant and Bailey (1997:24), “if third world political ecology is about the struggle between actors for control over the environment, it is as vital to appreciate the wider impact and significance of actors as it is to understand how those actors may interact in a given locality”. By laying emphasis on the political role of different types of social actors in human environment interaction, political ecology will be relevant to examine the dynamic interactions between people’s needs and nature as a resource and sinks, helping to access the power structures behind the causes of environmental problems and attempts to solve them (Dietz, 1996). Further by looking at the role and significance of different actors, the actor oriented approach of political ecology will be relevant in providing a comprehensive picture of the interests, actions and strategies of the differentiated social actors involved in relation to forest resource access and control. Lastly by emphasising the role and interactions of social actors, I reiterate the central importance of

politics in resource access and control. According to Bryant and Bailey (1997), there are two things that are at the heart of any meaningful understanding of politics. Firstly, an appreciation of the fact that politics is about the interaction of actors over environmental resources. Secondly, the recognition that even weaker actor's possess some form of power to act in the pursuit of their interests. This then suggests that politics is a process in which actors partake and interact to defend and advance their interests.

Central to political ecology is the issue of power. Power may be seen as the ability to dominate or to resist other actors. Lukes (1977:4) defines power as the "capacity to bring about consequences". A key principle of power is that it is fluid and spreads through society (Foucault 1980:98). In political ecology power is understood in relation to the ability of an actor to control their own interactions with the environment and the interaction of other actors within the environment. According to Bryant and Bailey (1997), power is above all the control that one party has over the environment of another party. Escobar (1996) contends that power influences the control of resources and interactions of actors who are placed on a platform of asymmetrical power relations. Bryant and Bailey(1997) in their Book 'third world political ecology' contends that unequal power relations among different social actors dictates the pattern of use, human ecology relations, actor interactions and environmental conflicts and management outcomes .

Power therefore becomes the major tool used by different social actors in advancing their interests and also for controlling a particular resource (Otutei, 2014). Ribot and Peluso (2003) showed how actors hold bundles of power, which they mobilise to gain, control and maintain access to tangible and intangible things. This suggests that power can be used to gain control over others. Poteete and Ribot (2011) showed how powerful actors in Botswana and Senegal used repertoires of domination to gain, control and maintain power in the face of new laws and programs for decentralising natural resource management and use. These powerful actors they argued, have been able to suppress the flow of power to weaker groups in local level decision making processes which enables the former to have power over the latter (ibid:446).

Power may also take the form of resistance (Blalock, 1989). For instance, in a study of forest commons in Rajasthan, India, Robbins (2012) found out that poor and marginalized actors constantly broke rules and used forests unsustainably due to dissatisfaction with management processes. Robbins concludes that "degradation and marginalization are interrelated, but mediated by local power relations" (ibid: 74). In Madagascar, Kull (1999) contends that, the

use of fire for traditional agricultural farming has been branded as the source of deforestation by conventional wisdom. Thus, burning has been highly criminalized in an attempt to conventionally arrest deforestation, depriving local peoples of their sources of livelihoods (Kull 1999). To resist such criminalization of their traditional practices, Kull argued that, farmers set fires at night and blame it on “passers-by” and “evil people” making management of fire impossible (1999; 2004). This presupposes that both weaker actors and their more powerful counterparts possess some form of power that they activate to defend and enhance their interests. The conceptualization of actor-interactions pervaded by a plurality of interests and the fluidity of power as central to and shaping environmental outcomes, makes the political ecology approach vital to this study. These include the following

3.2 Accessing and controlling forest resource as a reflection of diverse social actors interests

Human agency and structure is central to political ecology (Kalipeni and Oppong, 1998:1638). An actor/agent is an entity “that has capacity to formulate and take decisions and to act on some of them, the question of which decisions are acted upon, or can be acted upon, being an empirical matter” (Sibeon, 2004: 119). Structures are the “frameworks within which actors operate, and which they take into account” (Kooiman and Barvinck 2005). They include culture, law, agreements, material and technical possibilities as well as inherited trait (ibid: 17). In this sense human agency denotes the various actors that interact with the environment, while structures refer to the diverse ways which the actions of agents are channelled. According to Leach et al., (1999) the links between agency and structure, “emphasizes how structures, rules and norms can emerge and only exist as products of people’s practices and actions, whether intended and unintended”.

Though structures constrain the action of actors, political ecologists claim that actors are able to employ their agency to manipulate these structures to achieve their interests. One way of understanding the interaction of human agency and structure is through Giddens (1984) theory of structuration. Giddens theory focused on the recursive relationship between social structure and individuals. This presupposes that not only do structures shape human agency, but human agency also shapes the structures. Leach et al., (1999) contends, that the “behavior of social actors is not driven automatically and unconsciously by structures; rather they actively monitor, interpret and shape the world around them”. According to Holt-Jensen (2009: 162), “individuals are formed by society and its institutions, but they are also skilled agents who direct their own lives through actions”.

One way that structures and agency plays out in the environment is what Robbins (2012) has labelled as ‘environmental constructivism’. This is manifested in how structures (state) make irrefutable claims to control resource access by local forest users (agency). The state has “traditionally played a leading role in conditioning how diverse social actors interact with the environment” (Bryant and Bailey, 1997:48). According to Roe (1991), claims by the state are made based on narratives or in the form of stories with a beginning, middle and an end. Human agency (farmers, hunters and herders) are seen as the agents and victims of environmental problems (Leach and Mearns, 1996). Deforestation and possible forest management practices have been constructed to enable the states have access and control over forest resources at the expense of the local forest users.

Considering fuel wood crises as an example (see Leach and Mearns, 1996; Mearns, 1995), felling trees for fuel wood or charcoal is often assumed to be a prime cause of deforestation in Africa. This then presents a classic case of demand for fuel outstripping supply. “The problem is compounded by comparing current wood fuel consumption with current stocks and annual growth of trees. This comparison identifies a shortfall which is assumed to be made up by the depleting standing stock” (Leach and Mearns, 1996). The supply gap is then projected into the future, often in direct proportion to population growth, so that according to Leach and Mearns (1996), it widens even faster as sustainable yield diminishes. There is a crisis. This calls for solution to plant trees on a colossal scale to close the wood fuel gap. Forest agencies from the state with their financial and technical support must intervene (ibid). According to Robbins (2012) “the veracity of such claims does not reside in whether the crises is ‘actually occurring’ rather it is contingent on what is held as true by...competing interests”. This leads the state to put in place policies to plant more trees and to protect the forests. According to Leach and Mearns, (1996), “these policies and programs that result commonly prove at best to be neutral and at worst deleterious in their consequences for rural people and for the natural resource base on which their livelihoods often sustainably depend”. By so doing the state has been able to gain power to make the system (people and resources) governable.

Further, claims about forest loss show the interest and strategies of particular social actors. Leach and Mearns (1996) and Fairhead and Leach 1996; 1998) shows how forest loss in West Africa have been constructed by state elites to serve their interests by displaying constructed forest loss on forest dwellers and their traditional practices. Fairhead and Leach

(1998:175) argued that asking forestry administration to abandon narratives of decline and crises will require them to undermine their resource access-control claims. By so doing state elites have been able to control and exploit forest resources to their advantage. As Bryant and Bailey (1997) noted “local forest users or grassroots actors have more often than not been at the losing end of environmental struggles with their lot in a politicised environment, one largely characterised by marginality and vulnerability”. The above illustration therefore suggests that forest access and forest control is not always driven by concerns of forests but rather a desire for meeting the interests of the actors involved. Accessing forest and controlling its resources thereof, becomes a battle of interests and the ability of an actor to meet his or her interest becomes a product of power relations.

3.3 Power as pervading actor –interactions

An unequal relation between actors is a key factor in understanding patterns of human-environment interaction and the associated environmental outcomes (Bryant& Bailey, 1997). Power relations among actors in accessing and controlling forest resources, ensure that certain actors position their strategies to control resources at the expense of other actors (Bryant and Bailey, 1997). This is mainly done “through discursive means” (ibid: 41). For instance, powerful actors such as state elites, legitimize their control of forest resources through the use of the “public transcript”. Public transcript here refers to the “socially acceptable’ version of events represented in public documents, legal political ideologies...and so on” (Bryant and Bailey 1997: 42). By controlling the public transcript, powerful actors are able to render ‘natural’, and to justify the dominance of their interests on a society-wide basis (Bryant & Bailey 1997; Peet and Watts 1996; Escobar 1996).

Power permeates and circumscribes actor interactions and determines whose interests are met in such interactions (Otutei, 2014). Foucault (1982) captured the diffuse aspect of power as follows: “Power must be analyzed as something which circulates, or rather as something which functions in a form of a chain. It is never localized here or there, never in anybody's hands, never appropriated as a commodity or piece of wealth. Power is employed and exercised through a net-like organization. And not only do individuals circulate between its threads; they are always in the position of simultaneously undergoing and exercising power”. Power however theorised according to (Gaventa, 1995) is a pervasive feature of social relations. This presupposes that every social actor have some form of power that they activate in the pursuit of their interests in relation to the environment. Hussein and Ketz (1991)

identified three (3) variables that are necessary for examining power potential. These variables they identified are *abilities*, *constraint* and *opportunities*. The *ability* of an actor to achieve desired interest depends on their rights and resources. This is what Leach et al., (1999) termed as endowments in their environmental entitlements approach. *Constraints* are the barriers to the abilities of an actor. *Opportunities* provide actors with favourable conditions for the successful exercise of power.

Ledyayev (1997) classified power into six forms, namely: force, coercion, inducement, persuasion, manipulation and authority. According to Fairholm, *Force* is the “ability to impose obstacles restricting another’s freedom and inflict pain or discomfort” (2009:16). Hall et al (2011) in their book ‘*Powers of Exclusion Land dilemmas in Southeast Asia*’ noted that *force* is not a monopoly of the powerful and the well-connected. Force as a power form will be relevant to unravel the motives why local forest users don’t sometimes react when their crops are being destroyed by the forest guards or when their sawn lumber have been seized by the forest guards. In the case of *coercion*, compliance is achieved when the power holder acquiesce the subjects willingly under threats of forcible sanction” (Fairholm, 2009:15). This will be useful in analysing why local forest users enter into negotiations with the forest guards and why the forest guards also concur to such negotiations. DeCrespigny, (1968:198) noted that *inducement* occurs when a subjects compliance is based on a reward from the one exercising the power. This will be relevant to analyse why local forest users pay money to gain access and why forest guards accept these payments.

Manipulation occurs when the subject’s compliance is based on the “ability of the power holder to mask their intent to affect the subject’s behaviour directly” (Fairholm, 2009). This will be relevant to analyse manoeuvring mechanisms of forest resource between local forest user and the forests guards. According to Fairholm, (2009) persuasion is a form of ‘give and take’ in which actors interact in relative equality. Persuasion therefore occurs when the power holder presents arguments that appeal to the subject. This will be relevant to analyse why forest guards don’t always report to higher authorities the illegal activities of local forest users and also why the forest guards continue to indulge themselves in the informal mechanisms of forest resource access. According to Scott (1994), *authority* involves situations where the subject complies because of the conviction that the power holder has the legitimacy to command. These power forms discussed will be relevant to analysing how local

forest users act and react to the forest officials in relation to gaining access to and controlling of forest resources.

3.4 Actor Interactions and Outcome

The interaction between and among the powerful and weaker actors determines environmental outcomes. Powerful actors rely on the ‘public transcript’ to advance their interests and control over the forests. The weaker actor on the other hand rely on the ‘weapons of the weak’ which is afflated by the “hidden transcripts” – the alternative, dissident discourses or versions of phenomenon held exclusively by subordinate actors – that are contrapuntal to the “public transcript” (Scott 1990) to defend their interests. The unequal power relations among actors determines who gains access to the forests, who benefits, who resists and who loses out in gaining access to forest resources. The use of the public transcript to control access to the forests and the use of the weapons of the weak, which is inspired by the hidden transcript by local forest users, will be vital to analyzing the outcomes of actor interaction among the differentiated social actors in relation to forest access and control.

Even though the Political Ecology Approach will be useful in exploring the interests, motivations, the power relations and the forest user conflicts that occur between the forestry officials and the local forest users, it’s inadequate in fully exploring the benefits from the forests and its importance in rural livelihoods. In the next section, I shall examine the Access Theory by Ribot and Peluso (2003), with a focus on the benefits that local forest users gain from the forests, the importance of the benefits to their livelihoods and the mechanisms they activate in benefitting from the forests.

3.5 Access Theory and the manoeuvring tactics.

Ribot and Peluso recognized the complexity of ways in which access to resources is determined. They pointed out that a number of other mechanisms than legal rights such as networks; identity, social relations etc. plays out in shaping access. Ribot and Peluso define access as the “ability to benefit from things”—including material objects, persons, institutions, and symbols (2003:153). Ability is akin to power, which they define in two senses—first, as the capacity of some actors to affect the practices and ideas of others and second, they saw power as emergent from, though not always attached to, people (Ribot and Peluso, 2003:156). Access retains an empirical “. . . focus on the issues of *who* does (and who

does not) get to use *what*, in *what ways*, and *when* (that is, in what circumstances)” (Neale 1998:48 in Ribot and Peluso, 2003). People and institutions are positioned differently in relation to resources at various historical moments and geographical scales (Ribot and Peluso, 2003). The strands thus shift and change over time, changing the nature of power and forms of access to resources (ibid). Ribot and Peluso further noted that, some people and institutions control resource access while others must maintain their access *through* those who have control. Access analysis will be relevant to understand *why* some people or institutions benefit from resources, *whether or not* they have rights to them.

Ribot and Peluso distinguished between two sets of mechanisms which access is gained, maintained and controlled. The first is ‘right based access’ and it includes illegal access. Right based access refers to access sanctioned by law, custom or convention (2003:161). The second is ‘structural and relational mechanism of access’ which includes access to technology, capital, markets, labor, knowledge, authority, social identity and access via the negotiation of other social relations (Ribot and Peluso 2003:162). Ribot and Peluso see access relations as always changing, depending on an individual’s or group’s position and power within various social relationships. Generally, people have more power in some relationships than in others, or at some historical moments and not others.

Further Ribot and Peluso (2003) considered social action which they divided into access *control* and access *maintenance*. Access *control* is the ability to mediate others’ access (ibid). *Maintenance* of access requires expending resources or powers to keep a particular sort of resource access open (e.g., Berry 1993). Maintenance and control are complementary (Ribot and Peluso, 2003).

Access analysis according to Ribot and Peluso (2003) is, thus, the process of identifying and mapping the mechanisms by which access is gained, maintained, and controlled and the underlying power relations shaping these. A weakness of the access theory is a lack of conceptualization as to how different people get involved in the various forms of access mechanisms. Despite this weakness, the theory of access will be relevant to analyze the mechanisms of access at the local level. It will also be relevant in exploring the benefits that local forest users gain from the forest by activating the various forms of access mechanisms at their disposal.

Ribot and Peluso (2003) gave certain recommendations as to how access analysis must be done. Access analysis firstly involves, identifying and mapping the flow of the particular

benefit of interest in this case the benefits that local forest users get from the forests. Secondly, it involves identifying the mechanisms by which different actors involved gain, control, and maintain the benefit flow and its distribution. Lastly the theory of access will aid analysis of the power relations underlying the mechanisms of access.

The Theory of Access will be relevant in identifying the mechanisms by which the diverse social actors benefit from the forests. The Environmental Entitlements Approach will be used to aid the Theory of Access in categorizing the mechanisms of access, the negotiations, arrangements and agreements that occur between the forestry officials and the local forests users as institutions. In the next section I discuss the mediating role of institutions (both formal and informal) in maneuvering forest resource access.

3.6 Environmental Entitlements Approach

It offers a conceptual framework that highlights the central role of institutions in mediating the relationships between environment and society. This framework is relevant in exploring the ways differently positioned social actors command forest resources that are instrumental to their wellbeing.

3.6.2 The Environmental Entitlements Framework and the mediating role of institutions

As a framework for analyzing how different people gain access to and control over resources, the entitlement approach will be relevant to analyze how the mechanisms and processes of forest resource access and use are mediated by institutions, both formal and informal. Further it will be relevant to analyzing the role of institutions in forest resource governance in Ghana. The entitlements framework by Leach et al., (1999) considers the whole range of socially sanctioned as well as formal-legal institutional mechanisms for gaining resource access and control. This will be relevant together with the theory of access, in considering both the formal and informal means that local forests users use to maneuver forest resource access.

The entitlement approach further posits that, the relationships among institutions and between scale levels is of central importance in influencing which social actors both those within the community and those at some considerable remove from it - gain access to and control over local resources (ibid).

The environmental entitlements framework therefore links both the macro and the micro levels of concern. It situates ‘a disaggregated (or "micro") analysis of the distinctive positions and vulnerabilities of particular [social actors] in relation to the “macro” structural conditions of the prevalent political economy’ (Jenkins 1997: 2 in Leach et al, 1999). A vital component of the framework is its emphasis on institutions. Institutions are generally defined as “complexes of norms and behaviors that persist over time by serving collectively valued purposes” (Uphoff, 1986). They are the arrangements or 'rules of the game' which shape the behavior and include common understandings about how issues and problems are to be addressed and solved. Institutions are dynamic. They respond to changes in local actors and their understanding, as well as to external power or environmental conditions, but the process of change can be difficult (Leach et al., 1999).

Institutions can be described as the long-standing rules and rights governing social and productive behavior and organizations as the 'players' and structures, or “groups of individuals bound together by some common purpose to achieve objectives” (North, 1990). Institutions thus form the 'framework' upon which organizations are based (Leach et al, 1999). Several institutions, both formal and informal emerge as being important in mediating access to and control over forest resources in the high forest zone of Ghana. Formal institutions may be thought of as “rules that require exogenous enforcement by a third party organization” (Leach et al, 1999). The rule of law is an example, usually upheld by the state through such organizational means as law courts, prisons and so on (ibid). Informal institutions, however, “may be endogenously enforced; they are upheld by mutual agreement among the social actors involved, or by relations of power and authority between them” (Leach et al, 1999). Informal institutions may sometimes carry greater weight than formal institutions. In her 1997 article ‘Tomatoes, Land and Hearsay: Property and History in Asante in the Time of Structural Adjustment’, Berry (1997) contends that land in Kumawu, Ghana, is best secured through participation in negotiation processes rather than seeking formal tenure. Mearns’s (1996b) work on institutions stressed the multiplicity of institutional relations in which people are engaged at any one time. The “relationship between informal and formal institutions is thus competing and at times fuelling conflict” (Bejaminsen and Lund 2002), with actors manoeuvring within both fields.

The interactions among institutions at different scale levels are vital in the ways they circumscribe resource claims and management practices of different social actors (Leach et

al, 1999). At the international level, for example, the policies of donor agencies play an important role not only in directly shaping local approaches to natural resource management, but also in influencing domestic macroeconomic policy or governance in ways that cascade down to affect local natural resource management (ibid). At national or state level, government policies and legislation are of primary interest, including land tenure reform policies, or approaches to forestry and wildlife conservation and tourism. At more local levels these intersect with rural livelihood systems, intra-household dynamics, and so on (Leach et al, 1999). In short, institutions of various kinds, ranging from the informal (e.g. social norms) to the formal (e.g. the rule of law), interlock to form a matrix within which people live their lives. ‘Individuals often draw on and invest in a variety of institutions to defend or access resources now or in the future’ (Metha, Leach et al. 1999; Metha, Leach et al. 2003). Leach et al (1999), defined institutions as “regularized patterns of behavior that emerge from underlying structures or sets of 'rules in use’”. Regularized practices, performed over time, eventually constitute institutions (ibid).

In order to understand the range of formal and informal institutions that mediate processes of forest resource access, an understanding of 'rules in use' is therefore required, where different actors' regularized, everyday practices are central to any analysis (Leach et al., 1999). The framework will be relevant to analyzing how different positioned actors such as the forestry officials and the local forest users gain access to and control over forest resources. It will also be relevant to understand the prevailing institutions both formal and informal that mediate access to and management of forest resources at the local level.

Below is a conceptual framework based on the political ecology approach, the access theory and the entitlements framework.

3.7 Conceptual framework

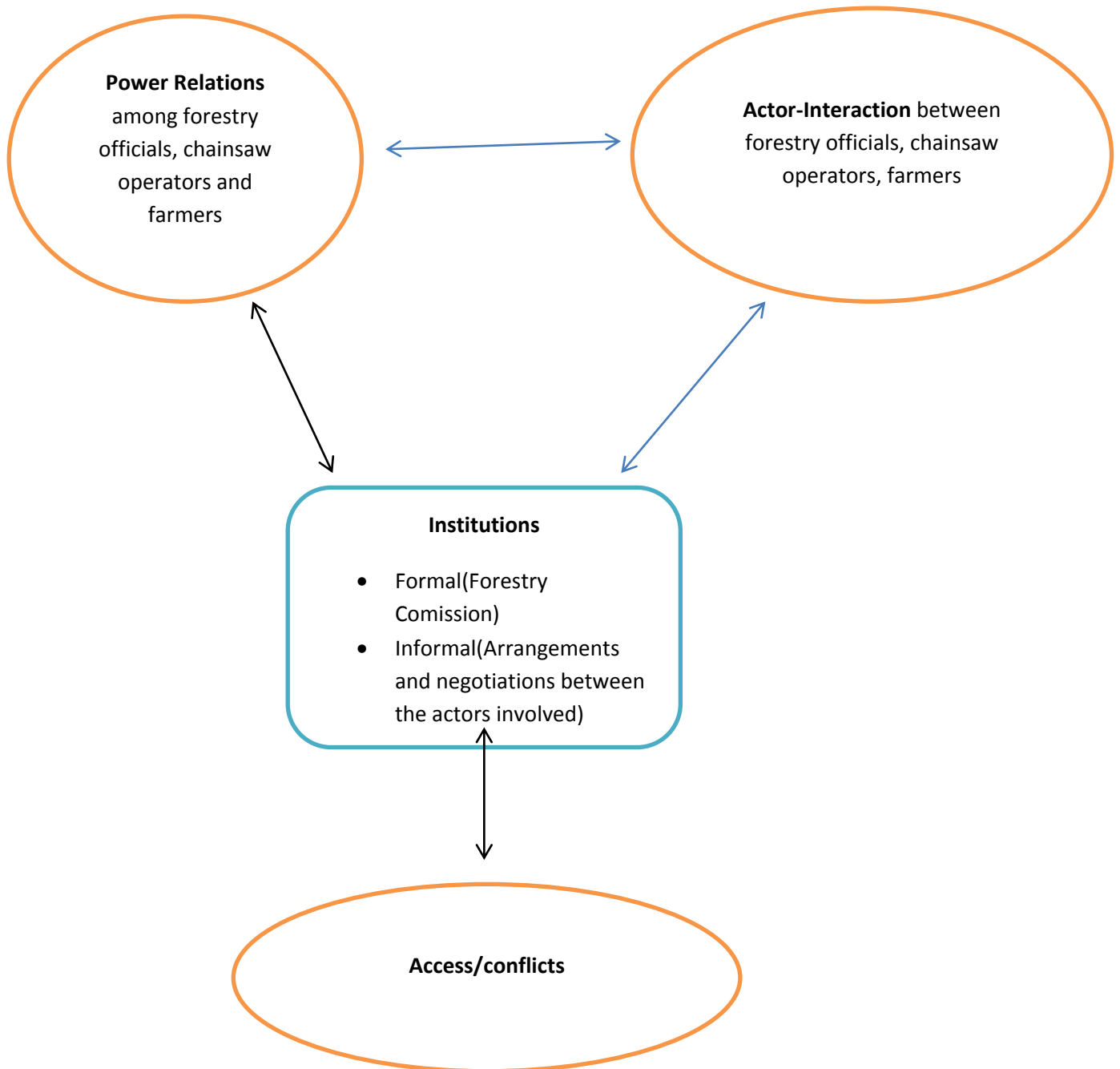


Figure 1: Authors own construct based on the Political Ecology, Access Theory and the Entitlements Approach

Linking concepts within the Political Ecology Approach, the Access Theory, and the Entitlements approach, I have constructed the above framework to enable me to analyze the mechanisms and processes of forest resources access.

The above review of literature on the theories suggests that forests and its resources are very vital for the wellbeing of diverse social actors. This leads to competing claims from differentiated social actors with diverse interests, goals and power. This competing claims then sets the stage for maneuvering and struggles over forest resource access.

Based on the conceptual framework it is assumed that, for actors to gain access to and control over forest resources, the following conditions have to prevail

- Actor interactions in relation to forest resources must exist
- Actor interactions are pervaded by unequal power relations, such that certain forms of power must be activated at certain times to gain access to or control over forest resources.
- Institutions both formal and informal mediate actor interactions in relation to forest resource access.

For instance the ability of an actor to derive benefits from the forest depends on the prevailing institutions which are pervaded by unequal power relations.

The components of the framework are discussed below:

3.7.1 Power relations:

Blalock (1989) in his Book 'Power and Conflict: towards a general theory' understood power in two ways. Firstly power as the achievement of specific objectives (goals). Secondly, power as the notion of overcoming resistances. Lukes (1977) as noted above defined power as the 'capacity to bring about consequences'. I see Luke's definition as encapsulating the concepts in Blalock's definition. That is, the ability to bring about a consequence suggests overcoming resistances to achieve a specific objective or otherwise. For the sake of this study I adapt Luke's definition which sees power as the ability to bring about consequences.

An unequal relation of power between differentiated social actors is very vital to understanding human environment interactions. The fluidity of power ((Foucault 1980) presupposes that every social actor has some form of power that they activate to defend their interests in relation to the forests. The forms of power (force, coercion, inducement, persuasion, manipulation and authority) by LedyaeV (1997) discussed above are adapted for this study. These will be relevant to understand the form of power an actor possesses and under what circumstances, they activate such power forms to defend their interests. For

instance what power forms enable local forest users to maneuver forest resource access? Further what power forms do forestry officials employ in their dealings with local forest users?

3.7.2 Actor interactions

. Kooiman and Barvinck (2005:17) defined interactions as “a specific form of action, undertaken by actors in order to remove obstacles and to tread new pathways”. This definition is adapted for this study. Kooiman and Barvinck (2005:18) perceived interaction as ‘a mutually influencing relation between two or more actors possessing an intentional or structural dimension’. The interaction between differentiated social actors is relevant to understanding human environment relations. Actor interactions will be relevant to exploring the politics that surrounds access to and control of forest resources. The cast of actors in this study include the state represented here by the forestry officials (forest guards, technical officers), local chiefs, and local forest users (chainsaw operators, forest farmers). Actor interactions collectively can bring about environmental practices and conditions and as Robins (2012:53) noted ‘beyond the capacity of any individual element’. The interactions between the different social actors in relation to the environment can be peaceful cooperation’s or conflicts. Peaceful cooperation suggest that ‘actors have been able to overcome their barriers and now are treading new pathways that benefit the actors involved (Kooiman and Barvinck, 2005). A conflict suggests that further negotiations have to take place for peace to prevail. Marginalization of some actors is a feature of actor interactions. Marginalization of some actors thus leads to the maneuvering of forest resource access. Further marginalization also sometimes leads to forest user conflicts which will be discussed later in the work.

3.7.3 Institutions

Leach et al (1999) defined institutions as “regularized patterns of behavior that emerge from underlying structures or sets of rules in use”. This definition is adapted for this study. I conceptualize institutions as relevant to this study due to two reasons. Firstly is to understand from an insider’s (local forest users) perspective, the mechanisms of forest resources access. This will enable me to understand both local level and external institutions that mediate forest resource access. Secondly, is to understand the effectiveness of these institutions in mediating actor interactions. Local level institutions can range from formal with documented rules for

transactions and decision making to informal where rules are not documented. Institutions at the local level are interconnected and also influenced by broader institutions that operate at the district, regional, national and even the international levels. The internal and external nature of institutions will be relevant in examining how rules (forest policies) affect behaviors (mechanisms of forest access).

3.7.4 Access

The definitions by Ribot and Peluso (2003) which sees access as the ‘ability to benefit from things’ is adapted for this study. Ability is ascribed to actors which Kooiman and Barvinck (2005:17) defined as social units that possess power of action. Access will be relevant to focus on issues such as who does and who does not get to use forest resources. As Hunt (1998) noted ‘use’ can be seen to mean the enjoyment of some kind of benefit. Certain social actors or institutions control resource access. This presupposes that other actors must maintain their access through those who have control. Access will be critical to understanding why certain actors or institutions benefit from resources whether or not they have rights to them. The benefits that are derived from the access to the forest for this study include forest lands for farming and forest trees for timber or sawn lumber.

In summary, the Political Ecology Approach lays emphasis on the politics that surrounds resource access and control. The actor interactions aspect of the political ecology approach brings to the fore, interest, motivations and power relations of different social actors in relation forest resource access and control. The Theory of Access lays emphasis on the ability to benefit from things. Firstly both theories lay emphasis on actor interactions. In order to understand the politics that surrounds resource access and control, there must be differentiated social actors who are interacting with the environment. Secondly both theories lay emphasis on how unequal power relation affects resource access and control. Hence the access theory will be relevant to complement the Political Ecology for the analysis of the work. This will then be relevant to analyze how differentiated social actors gain access to and control over forest resources. The Entitlements Approach resonates with portions of the Political Ecology Approach and the Access Theory. All of these approaches link issues at the micro to the macro. That is they lay emphasis on how local actions that affect resource access and control are linked to macro level factors at the national or even the global scale. The Entitlements Approach adds to the Political Ecology and the Access Theory, by conceptualizing institutions as mediating access to and control over resources. Further all the

three theories lay emphasis on unequal power relations and how it affects forest resource access and control. The harmony within these theories will be relevant to examine and analyze the mechanisms of forest resource access and its importance on rural livelihoods. The next chapter discusses the plans, and the methods that went into producing and analyzing the data.

Chapter 3

Methodology

This chapter focuses on the procedures and plans that went into achieving the research goals. It looks at the methods used in producing the data, the statuses I was ascribed and the roles I played during my fieldwork. It further looks at issues of positionality: insider and outsider perspectives of the researcher. In this research I used *largely* qualitative methods to produce data.

The qualitative method is claimed to be effective in exploring and understanding issues related to specific situations. To unravel the diverse factors interacting within which the mechanisms of forest resource access plays out, in the study area, I opted largely for qualitative research methods and techniques. The qualitative research methods made it possible to elucidate the informant's environments, their individual experiences and social processes in relation to the forest access and control (Hay, 2010). The qualitative method enabled me to “see through the eyes” of the informants. That is the qualitative methods enabled me to explore and understand the meaning individuals ascribe to the processes and mechanisms of forest resource access (Creswell, 2013). The qualitative methods used include participant observation of informants at their farms in the forests, interviews, group interviews and case studies. The interviews made it possible and flexible to address new issues as and when they popped up during the interview process. The research included key informants interviews and discussions with the Ghana forestry officials, the district director and the local chiefs.

I started the fieldwork from May to August, 2014. The study area, Bepposso, which is located within the high forest zone of Ghana served as good grounds for how local people maneuver forest resource access. During the fieldwork, I interacted with my informants without an interpreter. This is because I could speak all of them could speak Akan (Twi), Krobo (Ga-Adangbe) and English, all of which I could speak.

I asked questions, spent time with the informants in their farms in the forests and also with the chainsaw operators during their activities inside the forests. I also spent time with them at their homes especially in the evenings, since these were periods that most of them have returned from their farms.

3.1 *The first phase of the fieldwork*

On my first visit to the study area, Bepposso, I contacted the man who later became a very important gatekeeper. According to Kearns (2005), the most challenging process when doing fieldwork is gaining access to social settings and places. Gaining access to the right informants through the gatekeeper was very strategic and important considering the ‘illegal’ nature of the activities of the informants. My gatekeeper provided directly and indirectly access to key resources needed to do my research. He gave me a brief and concise lecture about the farmers in the village, the chainsaw operators and the nature of their activities. All these took place on a Wednesday. The following day, I took a walk around town with him and he introduced me to lots of the local people which some of them later became my informants. I could see this look on their faces which suggests that I wasn’t one of them or at best a visitor in the town. This then I think affected the first status they ascribed to me. Later that day, we went to see the *Odikro*³ and two other sub chiefs known as *Dademantse*⁴. As tradition demands in Ghana, you don’t see the chief empty handed. As a result I went with some local gin and alcohol. I told them about the reasons why I was there. They were happy to see me and my ability to speak in their dialect made them feel at home and even called me son. The chiefs welcomed me warmly and promised to introduce me to the township the following day which was a day set aside for communal labor. I was introduced to the township by the local chief. Many people had seen me in the town but didn’t know much about me. The introduction of me to the township by the chief really facilitated my data collection process. It enabled me to gain the trust of my informants during the data collection period. After the introduction, I participated fully in the communal labor with the local people.

The fieldwork was started on the topic ‘Deforestation and Rural Livelihoods’. This initial topic was aimed at gaining insight into the types of activities done inside the forest and its effects on the livelihoods of the local people. When I started the fieldwork, i realized that the forests were reserved and protected by forest guards who work under the auspices of the Ghana Forestry Commission (FC). I also realized that most of the local forest users were not

³ Odikro is a person who is appointed by the local community and endorsed by a paramount chief, to administer an area which is often a village. In the study area, the Odikro was seen as a mediator in disputes and a general fixer of the village or individual problems

⁴ The Dademantse assists the Odikro in carrying out his duties.

ready to disclose any information about their activities in the forest to me. Some of the informants I talked to were however open for discussions. One informant I managed to interview said that to perform an activity in the forest, you need a permit from the forestry department which was a very bureaucratic and costly exercise to undertake, ‘*so we do it our way*’. I asked him what he meant by ‘*we do it our way*’. He explained and said that, they get access to the forest through the forestry officials.

I became interested in how the forest guards were able to grant them access since they are not required by law to do. Throughout this early phase of the fieldwork, I spent time at the homes of farmers and made friends with them. Through this I had the opportunity to meet and interact with many farmers. Through these interactions, I became more interested in the ways that the local forest users get access to the forests. After considering the difficulty in gaining access to information about the types of activities done in the forest, I decided to change my research focus. I sent my supervisor an e-mail discussing the situation with him and I then redirected my focus to how local forest users gain access to the forests and its impacts on their livelihoods. I have now switched and looking at forest access and its influence on rural livelihoods.

Interestingly after changing my research focus to forest resource access and its influence on rural livelihoods, most of the local forest users⁵ opened up and showed interest in my new topic. Through a lot of informal conversations with the local forest users, I got much information on the mechanisms and processes that they use to gain access to the forests even though they were protected. They gave me information on the category of people and the processes that were involved in gaining access to the forests. I had this information because I think I had already gained their trust to a large extend. This may be due to the facts that I was introduced by the Odikro; and had participated in the communal labor together with them.

3.2 Role and status during the fieldwork: outsider /insider perspectives of research

After my arrival in the study area for the first time, I was given this unfriendly look. This then affected the first status ascribed to me by the community members; status as a new comer or a visitor. Through later interviews with the local people I noticed that some of them perceived me as a new teacher posted to their community. Linton (1936:113) defined a status as a “position an individual occupies in relation to the total society in which he or she lives”.

⁵ Local forest users: by this I am referring to forest farmers and chainsaw operators combined

‘Role’ is a dynamic aspect of status meaning it is the actual behavior which a person with certain status is expected to act’. During the fieldwork, I was ascribed several statuses; a student, a researcher, a Ghanaian, a footballer, a spy (in the sense that I came to observe their activities and to report to the Ghana forestry commission in Accra), and a son (the Odikro, sub chiefs and some elderly folks called me their son). As the researched progressed, I assumed different statuses in relation to the different informants. The above statuses I was ascribed came with rights and duties. When a rights and a duty are put to use, then a role is being performed.

At the beginning of my fieldwork I presented myself as student researcher and therefore my expected roles were to ask questions. This status as a student researcher gave me an outsider position. That is, I was not part of the local forest users and had no or little idea about the group and in this case knowledge about the mechanisms and processes of forest access. My status as a master student from Norway also created this ‘gap’ between me and most of my informants. This made me an outsider in relation to them. Not being a member of the chainsaw operating group also made me an outsider in relation to the chainsaw operating group. An instance of this occurred when I was talking to one of the chainsaw operators, this is what he said: ‘it is true that you have been introduced by the Odikro at the communal labor but what shows you are not a spy’. The status ascribed to me as a ‘spy’ who is in the area to monitor their activities and to report to the forestry commission in Accra also gave me an outsider position in relation to my informants. I therefore showed my Norwegian student identity card and the introductory letter from my supervisor to them. This enabled me to gain their trust and to be seen as just a student researcher that meant no harm to their activities or the sources of their livelihoods.

My introduction to the community by the Odikro also killed a lot of doubts about me, and this enabled the informants to ascribe me an insider position. My involvement in the communal labor of the community made my insider position my apparent to me. My informants gained trust towards me and saw me as one of their own. I observed during the fieldwork that, Football activities were the most enjoyed games by the local people. I therefore joined the football team since I am a good footballer. Through the football team I got to meet many people who were forest farmers and chainsaw operators. We trained and played football games together especially on Sunday evenings. Being part of the football team with the local people also made them ascribe me an insider position. I was also ascribed

an insider position when I joined the local people to their farms. In the farms I tried to work very hard as a farmer even though I wasn't that strong and a good farmer. We sometimes had lunch together inside the farm. This made my informants ascribe me an insider position.

I also participated in the activities of the chainsaw operating activities. Certain times these activities were done in the nights. I was involved mostly in the ones done during the day, since it's a risky job to undertake and a matter of brevity. I carried the chainsaw or sometimes I carried the petrol that will be used to power the chainsaws. My strong involvement in the activities of the chainsaw operators made them ascribe me an insider position. My multilingual background and ethnic belonging to some of my informants made them ascribe me an insider position.

My status as a Ghanaian nationality that was staying with them in the local community made the informants ascribe me an insider position. During the fieldwork, a lot of merits and demerits were associated with my status as an insider or an outsider. Mullings (1999:340) noted that insiders are "able to use their knowledge of the group to gain more intimate insight into their opinions" and have access to information more easily. My ability to participate in the activities of the chainsaw operators and the forest farmers enabled me to gain their trust. Gaining their trust therefore enhanced my data collection, during periods of interviews with them later on. For instance, after participating in the activities of the local forest users, they gained my trust and were willing to talk to me about the mechanisms and the processes of the nature of their activities.

Further, my ability to communicate with the forest farmers and the chainsaw operators in their native languages enabled me to also gain their trust. For instance after introducing myself to the head of the chainsaw operators in his native language he said "*oh you are a Krobo too, then you are one of us...you are welcome*". In the extract above my ability to speak the native language which produced the result "one of us" increased trust and produced a sense of belonging for the informants to talk to me. I simultaneously assumed both the insider or outsider positions during my fieldwork depending on the place and informants that I was interviewing. Whiles I was ascribed an insider status among some informants; I was an outsider among others too. I was concurrently an insider or outsider or both and neither as Mullings (1999) put it. At some points during the research, my status could not be defined. It therefore appeared to me that I probably might appear as both an insider and outsider to this informants. Fonow and Cook in Mullings (1999) noted that being an outsider, by not

belonging to the group under study, one is more likely to be perceived as neutral and might have a greater degree of objectivity.

In trying to get more insight into the processes and mechanisms of forest access, being an outsider could resist access to vital information. For instance after introducing myself and showing my student id card and the introductory letter from my supervisor, one of the forest guards I was trying to interview said “what shows you are not an insider from the forestry commission to come and investigate our activities here”. It therefore appears that being an outsider therefore can impede access to information vital for research. As a result, I kept on reflecting on my ‘positionality’ and I strategically participated actively, in the subsequent communal labors. This increased trust towards me vehemently and eventually facilitated the data production process considering the ‘illegal’ nature of the informant’s activities.

I was ascribed an insider status as a young Ghanaian boy interested in the affairs of the local community. Going to farms with the local forest users and also participating actively in their activities made my insider position more apparent to me. For instance, I remember one Thursday evening; I had a phone call from one of the chainsaw operators asking me if I could go to the forest today with them, because they were ready and about to leave.’ Here I was ascribed an insider status or position because they have gained my trust through the previous chainsaw activities which I was part of. Further they also considered me as not posing a threat to their activities and at best their livelihoods. My insider position became more apparent to me when I interviewed informants in their homes, after which they invited me for dinner which I participated actively. During these times we discussed issues about the nation Ghana, the forests and also about rural livelihoods.

3.3 Sample population

Bryman (2012:187) defines a sample as the segment of the population that is selected for investigation. It’s a subset of the population. According to Angelsen et al (2011), sampling is an efficient way alternative to undertaking a full census of a target population and that one can make inferential generalization about the target population based on the findings from the sample. Purposive sampling which has the characteristics that are determined by the objectives of my research was used to choose cases. This enabled me to choose cases that offered insights and explanations into the mechanisms and processes of forest resource access. Snowballing technique which describes using one contact to help you recruit another

contact that in turn can put you in touch with someone else relevant to the study was used to build up a layer of contacts for the interviews (Valentine, 2005). According to Bryman (2012), in snowball technique the researcher samples initially a small group of people relevant to the research questions and these sampled participants propose other participants who have had the experience or characteristics relevant to the research.

Forest farmers that I was introduced to were asked to identify other people they knew who were also farming in the forest. In relation to the chainsaw operators, I was introduced to the head or leader of the chainsaw operating group who later became one of my key informants. I was introduced to him by his son when we met during one of the football training sessions. The leader of the chainsaw operators then introduced me to other members who were chainsaw operators that I could talk to. Considering the 'illegal' nature of the informant's activities, and being aware of threats to validity and reliability of the data being produced, I made use of multiple initial contact points when I started the snowballing technique. This enabled me to avoid recruiting all my informants from a narrow circle of like-minded people who wanted me to talk to their friends or neighbors, but rather from a wide range of local forest users.

The sampled population consisted of eighty (80) informants, out of which 12 were women. More men were interviewed than women corresponding to the old belief in Ghana that certain activities are for men only, in this case chainsaw operating and farming inside the forest. It also corresponds to the gender disparity in the forest farming and chainsaw operating activities in Ghana. Out of the twelve (12) women interviewed, five (5) were chainsaw machine owners. These women were not directly involved in the sawing of the lumbers, but served as financiers of chainsaw machines especially to their husbands. *"As one of the informants noted when I was asking him about conflicts with forest guards: what do I tell my wife when I go home. The machine belongs to her. I can't let the forest guards seize it from me.* The remaining seven (7) women were forest farmers themselves. They had farms inside the forests. I realized during my fieldwork through participant observation that while the men were producing plantain and cocoyam; the women took to pepper, tomatoes and okra production. The sixty eight (68) men in the sample were seventeen (17) officials from the forestry department, two (2) officials from the local district assembly, three (3) sub divisional chiefs, twenty (20) chainsaw operators and twenty six (26) forest farmers. Akan (Twi), Ga-Adangbe (Krobo) and English were used to conduct all my interviews.

3.4 Data production instruments and strategies

To elucidate and get more insight into the mechanisms and maneuvers of forest resource access, the forest user conflicts that occur and its impact on rural livelihoods, qualitative methods were used to produce data. The qualitative instruments used include the following:

3.4.1 Interviews

Interviews enabled me to get deeper understanding into the processes and the role of actors in forest resource access and its impact on rural livelihoods (Clifford et al, 2012). To Kitchin and Tate (2013) interviews allows a more thorough examination of experiences, feelings or opinions and can provide rich sources of data on people's experiences, opinions, aspirations and feelings. The interviews enabled me to understand how the forest guards, forest farmers and the chainsaw operators experience and make sense of their own lives (Valentine, 2005) in relation to the forests. The interviews were very useful in analyzing the interests of the various actors, their mutual dependencies, their networks and power relations. The interviews were also vital in exploring the interactions among the chainsaw operators, the forest farmers the forest guards and the local chiefs. Further the interviews provided a good understanding into the experiences, negotiations, and conflicts between the forestry officials and the local forest users. Interview guides, informal conversations and questionnaire surveys were the interview methods used to produce the data. I used the interview guides to interview forestry officials to produce data on their opinions and appraisals about forest access. The informal conversation and questionnaire survey were used to interview the forest farmers and chainsaw operators. This enabled me to produce data on the strategies and tactics that they put up to benefit from the forests. The interviews allowed informants to raise issues that I the researcher did not anticipate from the onset. An instance of this occurred when I was interviewing one of the forest guards and he said their superiors (Technical Officers TOs) also receive their share of the gifts and payments that they collect from the local forest users. I used the interview guide to interview mostly officials from the forestry commission and the district assembly to solicit their views on the mechanisms of forest access and the benefits from the forests. Below is the sample of officials interviewed. I have grouped them into gender and the type of work they perform.

Table 1: showing government officials interviewed

Gender	Number of people	Type of activity performed
Male	1	Regional Forest Director
Male	1	District Forest Officer
Male	10	Forest Guards
Male	1	District Chief Executive
Male	1	District Director
Male	1	Assemblyman
Female	1	Unit Committee Chairperson
Total	16 (20%)	

I interviewed these key informants to gain further insight in to their views on forest access and its impacts on livelihoods in general. A key informant is a person who is ‘considered to have some depth of knowledge concerning the research problem and who is willing to talk’ (Broshenka and Castro, 1983). Most of the interviews with these key informants weren’t all that smooth. It was characterized by interruptions. This is because, either they had visitors coming in or they were making and receiving phone calls. Nevertheless I skillfully manoeuvred and saw all of such interviews to completion, even though they were time consuming.

I also used interview guides to interview other local officials from my study area. These included the Odikro, and the two sub divisional chiefs, the head of the chainsaw operator’s and the local unit committee chairman. The Odikro and other sub divisional chiefs were interviewed on how the local forest users get access to the forest. It appears from the interviews that they were not directly involved in the granting of access to the forests. Their duty was more visible especially during moments of forest user conflict resolutions.

Table 2: local key informants interviewed

Gender	Number of People	Position /activity
Male	1	Odikro
Male	1	Dademantse
Male	1	Dademantse
Female	1	Unit committee chairman
Male	1	Head of chainsaw operators
Total	5 (6.25%)	

Issues about rural livelihoods, opportunities and challenges facing the community were also discussed. Further issues about forest management by the Forestry Commission of Ghana were discussed. Livelihood issues and the way forward for the local people were also some of the issues that came up and were discussed. Special emphases were laid on how rural livelihoods dependent on the forest will be improved, vis a vis managing these same forests.

Finally the questionnaire surveys and informal interviews were used to solicit information from the chainsaw operators and forest farmers. The questionnaire survey enabled me to gain factual information about the features, opinions and appraisals and experiences of local forest users. This enabled me to collect data on the incomes of the local forests users. The survey also provided me with lots of information on the background information on the gender, ethnicity and religious belongings of my informants. Further the mechanisms that local forest users activate to manoeuvre forest resource access were explored. The questionnaire survey also enabled me to gain information on who grants forest resource access to the local forest users and the cost involved in such processes. To Kitchin and Tate (2013) open ended questions gives the interviewer much freedom to explore specific avenues of enquiry and logical gaps within the data can be anticipated and closed. The questionnaire used for the survey had open ended questions. A face-to-face interview was used to conduct fifty four (54) surveys. Below is a table showing local forest users interviewed using the questionnaire survey.

Table 3: number of informants interviewed using the questionnaire survey

Type of work	gender	Total number of informants
Chainsaw operators	males	20
Forest farmers	Males	26
Forest farmers	female	4
Total		50 (62.5%)

The sample of local forest users is fairly distributed. This is because within the study area forest farming and chainsaw operating appears to be a venture for men mostly. During the survey, I realized that some informants were more knowledgeable on a range of issues pertaining to the mechanisms of informal forest access than others. Being aware of the threats to both validity and reliability of the data, I therefore interviewed this group of informants more than once using both the questionnaire survey and informal conversations to nuance their responses. For instance forest farmers interviewed using the questionnaire survey who were more knowledgeable on a range of issues using the questionnaire survey were later on interviewed using informal conversations. Further chainsaw operators who were interviewed using the questionnaire survey, were further interviewed using the informal conversations. This was because during the informal interviews they were more confident and discussed issues that really mattered to them in relation to the forests. I also realized that new issues worthy of further probing emerged during the informal conversations. The informal conversations enabled the informants to relate their experiences, to describe how they get access to the forests and also to discuss issues relevant to them. Further it enabled the informants to reveal their opinions and attitudes as they see fit in relation to the forests and their livelihoods. During this second interview sections, issues were made more clear and vivid to me. The interviews lasted between thirty minutes to three and a half hours (0.5-3.5 hours). This provided enough time for both the researcher and informants to clarify issues pertaining to the manoeuvrings of forest resource access. I had no need for an interpreter since I was able to understand and speak all the languages within the study area. Issues relating to the forest, the nature of informants activities, how forest user conflicts arise, the

impact of the forest access on local livelihoods and how local forest user are able to maintain their access to the forest were explored using the questionnaire survey combined with informal conversations.

3.4.2 Group interviews

During the fieldwork I organized group interviews for chainsaw operators, forest farmers and for chainsaw operators with forest farmers combined. The group interviews for the forest farmers had only one woman. This was because the other four (4) women who were forest farmers were either busy cooking for their families or they were performing other activities that they couldn't make it to the group interviews.



Plate 1: a photo showing a group discussion with forest farmers and chainsaw operators

The group interviews brought out feelings and experiences that were not articulated during one-on-one interviews. For instance in the group discussions with the forest farmers, the informants expressed their grievances against both the forest guards and the chainsaw operators. “The forest guards like money too much, the chainsaw operators destroy our crops even though the tree they fell sometimes takes the shade away from our crops”. These were some of the responses that came up during the group interviews. I think that the forest

farmers felt more 'safer' within a collective environment. This is because during one on one interviews with most of them, hardly did any of them criticized either the forest guards or the chainsaw operators. Also during the group interviews with the chainsaw operators, it was very interesting to observe how they directed their grievances to the forest guards even though they were aware that their activities were 'illegal'. Group interviews with both the chainsaw operators and the forest farmers together enabled me to nuance their responses and further to increase the reliability of the data produced. The combination of different qualitative methods was also important for explaining the complexities, contradictions, ambiguities and messiness of human behavior and everyday life (Valentine, 2001) of the informants in relation to the forests. For instance, through in-depth discussions during the group interviews, the reasons why some local forest users still collaborate with forest guards, despite the fact that they (farmers and chainsaw operators) activities are illegal have been uncovered. Certain statements given by key informants were further contested during the group interviews and clarity was obtained.

3.4.3 Participant observation

"If you want to know what it's like being an eco-warrior, then rather than just asking them, *become* an eco-warrior"(Kitchin and Tate, 2013). In participant observation the researcher seeks to observe events and the behavior of people by taking part in the activity themselves (ibid: 221). To Hay (2010), through participant observation one is able to understand fully the meanings of place and the contexts of everyday life. Participant observation also brings out the understanding people attribute to their environments and behavior (Bryman 2012). Through participant observation during the fieldwork, I was able to enhance my contextual understanding of the processes that local forest users employ to manoeuvre forest resource access. By actively involving myself in the activities of the local forest users, I was able to construct an in-depth understanding and interpretation of the nature of their activities. During times when I was together with the forest farmers inside the forest, I introduced issues to be discussed and also asked a lot of questions about their activities. I also participated in the activities of the chainsaw operators. I sometimes was the carrier of the fuel (petrol) that they used to power their chainsaws. Since these machines made a lot of noise, I grasp these opportunities of being in the forest with them to book further interviews with them in their homes. I also realized through the participant observation that, the activities of the chainsaw operators were done very fast and quick. There was no time for playing and no room for dawdling. Through informal conversations during the activities, I asked them why they were

so much in a hurry. ‘We have to work fast and get out of here before we are caught by the forest guards’ said one of the chainsaw operators. This presupposes that there was no time for delays. Even if the forest guards gave you the permission, you have to work fast and leave the forest. This is because the superiors of the forest guards sometimes undertake random patrol in the forest. Through my participation in the activities of the chainsaw operators, I realized that there were head porters or carriers who were ready to carry the sawn lumber to a safer place. Through further informal conversation with these porters, I realized, that was their major source of livelihood and income. Further through participant observation, I was able to get an in-depth understanding of the activities of the chainsaw operators from felling a tree to marketing this same tree which has been turned into a lumber. A range of issues were discussed and deeper understandings were reached during my involvement in the activities of the local forest users. I talked to locals in the course of my research, but I think that the depth of my involvement in the study area, my rapport and recurrent contact with the local people, participating actively in communal labors, going to farm with forest farmers, involving myself in the activities of the chainsaw operators and playing football games together with my informants enhanced my data production process.



Plate 2: Researcher (Extreme right) participating in chainsaw activities inside the forests

3.4.4 Photo elicitation

According to Harper (2002) in Bryman (2012:480), photo elicitation is defined as “the simple idea of inserting a photograph into a research interview”. I used images as a springboard for discussions with the informants concerning the meaning and significance of the images (Bryman, 2012). At the earlier stages of my research and together with some local farmers, we went into the forest to observe farms inside the forests and sites that chainsaw operators have recently undertaken their activities. The images I took were images of events and contexts that were significant to the study. Photos of trees that have been sawn by chainsaw operators inside the forest and farms located inside the forests were captured. When I used these pictures during interview sessions, I noticed that it enhanced the responses from my informants. I also noticed that it enabled the informants to speak freely as the photographs served as prompts for discussions. The use of the photographs also stimulated the informants to remember people and other informants who were involved in such activities. The use of the photos together with informal conversations to interview chainsaw operators made it easier for them to identify other informants who were very significant for the study. The use of photographs served as a stimulus for my interview questions. The images therefore helped me to grand my interview questions. This I think is because the informants were able to engage visually with settings they were familiar with and were able to think and respond appropriately.



Plate 3: a recently done chainsaw activity (left) and a forest farm (right) used for interviews

3.4.5 Case studies

Gerring (2004:342) in Hay (2010) defined case study as “an intensive study of a single unit for the purposes of understanding a larger class of (similar) units’. Thus case study research involves the study of a single instance or a small number of instances of a phenomenon and the contextual influences on and explanations of that phenomenon (Hay, 2010). I used qualitative case studies which enabled me to intensively and holistically, understand how the various forms of Ghana’s forest policies, forest management regimes has led to informal mechanisms of forest resource access at the local level. The case studies I used further enabled me to understand how rural livelihoods and informal forest access mechanisms at the local level are connected to forest management policies both at the national and international levels. Other case studies examined why forest user conflicts emerge and how they were resolved. Due to the ‘illegal’ nature of the activities of the local forest users, pseudonyms will be used for all the informants while presenting the cases.

3.4.6 Secondary Data Sources

According to Clifford et al., (2012:61) secondary data is “information that has been collected for another purpose but which is available for others to use”. The nature of this project necessitated relying on official Forestry documents. Relevant official documents from various local organizations, such as the Ministry of Lands and Forestry, the Forestry Commission of Ghana, District Assemblies and Environmental NGOs, will be used for the analysis. Other secondary data sources include journals, articles, books, official reports and internet sources.

3.5 Data analyses

The data produced will be analyzed qualitatively to enable me to present case studies and direct statements from the informants. The data will be analyzed by coding responses into themes based on the research questions and the theoretical frameworks used. The qualitative data will further be subjected to intensive content analysis. Quotations will be used to emphasize certain statements and assessments.

3.5.1 Categories

A ‘*concept*’ is the idea of the existence (or non-existence) of something, whereas *categories* are the actual outcome of that idea at the observational level’ (Aase & Fossåskaret, 2007). In general we can say that interpretation consists of the informant’s categories and finding out which categories they localise their observations in (ibid). Methodologically, Aase and Fossåskaret, (2007) noted that, this involves the researcher asking four questions. First is to map out which categories the informants have in association with the given subject. Next the researcher has to find out how the categories are constructed. Thirdly interpretation involves the way the informants relate their categories to each other. The last task is to identify informant’s localisation of observations in the respective categories. Through interviews and the data produced, the local forest users categorised the forests as a source of resource to be accessed and used to enhance their livelihoods. They saw the forests as places to gain land to farm and also to get trees to saw for lumber. This categorization by the local forests users enabled me to probe, unravel, elucidate and to analyze their motivations for manoeuvring forest resource access.

3.5.2 Interpretation of photographic materials

I used photographs during the research interviews. Photos used were farms located inside the forests and chainsaw operating activities (see plate 3). The use of photos together with the interviews served as a stimulus which enhanced the data production and analysis process.

3.6 Validity and reliability of the data produced

Threats to validity and reliability can occur from the research design, analysis and to the interpretation stage of any research process. I therefore put in place mechanisms to ensure that threats to validity and reliability of the research were dealt with.

3.6.1 Validity

Validity concerns the “extent to which an account accurately represents the social phenomena to which it refers” (Hammersely, 1990: 57 in Silverman, 2013: 284). Validity involves the value of the data produced in answering the research questions. To ensure the validity of the data produced, I made sure that I asked the right questions. To achieve this, I asked concrete incident questions pertaining to the activities of the informants. I further made sure that the informants understood the research questions being asked them. I therefore explained the questions in the native language of the informants. By so doing, both the informants and the researcher had the same understanding and interpretation. These I think have increased the validity of the data produced in answering the research questions.

3.6.2 Reliability

Hamersley (2013) defined reliability as the “degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions”. Reliability concerns the trustworthiness of the data produced

The vagaries of the memories of my informants, served as a threat to reliability at the initial stages of my data collection process. These accounted for reports in which some observations were crystal clear while’s others were obscured or distorted. This surfaced during the interviews when I asked local forest users about the incomes they get from their access to the forests. Exact figures or amounts were difficult to remember. I must admit that the figures given by the informants were estimates and not real amounts. To increase the reliability of the

data, I made every effort possible by asking questions that elicited responses or made informants remember the incomes they made.

Further, another threat to reliability surfaced, when informants tend to shade their responses to present a 'positive picture' of themselves. For instance during the early stages of my research, when I asked the forestry officials their views on the informal mechanisms of accessing the forest, and whether they were involved in granting this kind of access: their responses were 'no'. This I think shows an identity appropriate to the situation of the interview. That is forestry official including the forest guards are responsible for managing the forest and not to grant access to local forest users. To ensure the reliability of such data, I established trusting relationships especially with the forest guards. Through these trusting relationships I was able to detect from later interviews with them that, they were involved in granting the informal access mechanism and were in fact, the real actors or determinants of what goes on inside the forests.

Further, threats to reliability of the data produced can occur anywhere in the data collection process. To avoid these threats, data was produced through multiple sources to include interviews, observations and documents analysis. This is what Guba and Lincoln (1982) referred to as triangulation. Devine and Heath (1999: 49) captured this perfectly when they wrote that: "triangulation can be used effectively to explore the dynamics of complex social phenomena, highlighting the multi-layered and often contradictory nature of social life". To achieve this, I interviewed different categories of informants on the same issues. For instance to ensure the reliability of the data from local forest users, I asked chainsaw operators about the activity of forest farmers and also asked forest farmers about the activities of the chainsaw operators. This enabled me to check for the trustworthiness of the data being produced. Further forestry officials were interviewed about the activities of the local forest users and vice versa. Further I was also undertaking participant observation and consulting works by others to grand the findings. Triangulating therefore enabled me to crosscheck data being produced. All these ensured that the data I was collecting from each category of informant was very authentic, trustworthy and reliable.

Another factor that posed a threat to the reliability of the data production was my status as a student from Europe. This surfaced during the early phase of my research especially in relation to the forest guards. I wanted to examine whether the local forest users who said that they paid and negotiated forest resource access through the forest guards was true. This could

not be verified only by interviewing the local forest users. The opinions and appraisals of the forest guards were very vital in this instance. During my first interviews with the forest guards, I realized this feeling of uneasiness after introducing myself. During an interview session with one forest guard, he said that he knew nothing about payments and negotiations of forest resource access by the local forest users. At this moment the information I was being given here was not reliable. This was because I had already interviewed some local forest users who said they got the forest access through the money they paid to this forest guards. This informant therefore concealed salient information which affected the reliability of such data during the early phase of the research. It was after I had stayed in the community, participated in communal labors and had built an interviewing relationship with him that he later came out to admit that such payments and negotiations were actually in existence. This I think was because he had gained my trust.

Further the location of interviews and the presence of others was another major factor that posed a threat to the reliability of the data. Some informants were interviewed together at the initial stage of the fieldwork. I observed that during the interview process, they looked straight into each other's face and asked *what should I say?* And things like *'I should have answered like you did'*. I got these reactions mostly when I asked questions about how the local forest users got access to the forest. Mullings, (1999) defined positional spaces as "areas where the situated knowledge's of both parties in the interview encounter, engender a level of trust and cooperation". To ensure the reliability of the data, I created these positional spaces by ending the interview processes and rather made appointments with informants at locations convenient to them. I completely avoided interviewing informants together or in the presence of others except in the group interviews.

Another issue that posed a threat to the reliability of the data was the degree of trust between me and my informants. This was also because of the 'illegal' nature of their activities. For instance one of the chainsaw operators was not willing to disclose any vital information to me and even said that what shows I wasn't a 'spy'. This was also evident in the early stages of the fieldwork, when I was trying to interview a forest guard about payments they receive from local forest users to access the forests. This then affected the reliability and credibility of the data at this point. I therefore made friends with them, went to farms with them and also went for communal labors with them. I also visited them in their houses and we sometimes played football together. This therefore enabled me to gain their trust to some extent. After

these contacts, the informants were free to tell me any information I needed to know about their activities. This has therefore improved the trustworthiness of the data produced.

Lastly, another factor that posed a threat to the reliability of the data was informants determined to present a particular picture. An informant I interviewed was very anxious to have me believe that he had been a success when it comes to working in the forest. When I asked him for the ways or procedures he used to get access to the forest, he was very much evasive. Every effort I made to elicit how he got access to the forest was sidestepped. I therefore made further efforts and I said something like ‘I need you to tell me which level of forest officers gave you the access? How did you manage to get access? It occurred to me that my further urgings won’t work either. At this moment the reliability of the information he was giving me was uncertain. I switched to an area I felt he will be comfortable. I asked about the income he gets from the forest. He was still evasive. I therefore thanked him and ended the interview. Such informants were made out and the data collected from them was discarded to enable me to enhance the reliability and the trustworthiness of the data produced.

3.7 Ethical Issues in Research

Ethical issues arise at various stages of the research. This section deals with the concerns about ethics that arose during the fieldwork. I will discuss ethical issues that arose because qualitative research typically involves interpersonal relationships, interpretations and experiences of people. Ethical issues that arose and how they were dealt with include the following:

3.7.1 Privacy and confidentiality

Qualitative methods often involve invading someone’s privacy (Hay, 2010). The degree to which invasions of privacy of my informants is condoned is very much an issue of ethical consideration. I have therefore been extremely careful in relation to how i discuss the informants and their settings. I asked very personal questions and also participated in the activities of my informants. I observed during the fieldwork that, even though the informants agreed to be interviewed, they frequently refused to answer certain questions in details no matter the further urgings. This reiterates the assertion of Spradley (1980) that participant observation invades the life of the informant. I noticed that these refusals were based on a feeling that certain questions delve into their private lives. Informants did not want to make public their private lives, regardless of the fact that the interviews were conducted in private.

These issues were clearly manifested when informants were asked about the incomes they get from the forest. Exact figures were not given firstly due to the fact that it had more to do with their private lives and also due to the lack of records of the informant's income earned. Privacy was therefore ensured by assuring informants that any information they provide will not be disclosed to others and that their information will be kept confidential. I therefore ensured an active attempt and removed from the research records any elements that might indicate the subject's identities. Closely related to privacy and confidentiality are issues of informed consent.

3.7.2 Informed consent

According to Bryman (2012) informed "consent means that prospective research participants should be given as much information as might be needed to make an informed decision about whether or not they wish to participate in the study". With regards to this, the informants were not under the impression that they were required by all means possible to participate in the study. I further made informants aware of their entitlements to refuse at any stage for whatever reason and to withdraw their just provided information. I further made it meaningful to the informants what the research is about, the sort of issues we will be discussing, what I expected from them, and the duration of the interviews and why the research was being undertaken. The informants were made aware and their permissions were sought before using the digital audio recorder. Related to the issue of informed consent is the issue of harm.

3.7.3 Harm

Harm can entail a number of facets: physical harm, harm to participant's development; loss of self-esteem, stress and inducing subjects to perform reprehensible acts' (Dienar and Grandal 1978:19 in Bryman 2012:135). To Hay 2010, your research should not expose yourself and your informants to harm whether physical or social. To avoid harm to the informants, I have ensured the confidentiality of the data produced. Further pseudonyms have been used to replace the real names of the informants and the study area. Further due to the 'illegal' nature of the activities performed by the informants, causing harm socially is very high and likely. This is seen in authorities becoming aware of the nature of the activities of the informants. This I think will have very grave consequences on the livelihoods of the informants. The local forest users will lose their access and source of livelihood. The forest

guards on the other hand will also lose their source of livelihood should any whistle be blown or higher officials becoming aware of the nature of their activities. I have therefore avoided harm to my informants and their livelihoods through fictitious names and the careful presentation of cases.

In summary this section has looked at procedures and plans that went into achieving the research goals. The qualitative methods enabled me to see through the eyes of the informants. Even though it was time consuming, it enabled me to garner a wealth of understandings about the mechanisms and processes that local forest users employ to benefit from the forests and its effects on their livelihoods. In the next chapter, and setting the stage, I present the forests, the diverse actors and forestry institutions in Ghana.

Chapter 4:

Forests, forestry institutions and actors in Ghana

This chapter looks at the forests in Ghana, the institutions that are involved in the management, use and protection of the forests. The cast of Actors interested in the forests and its resources from the local to the international level are also discussed. Stakeholders in the forest estate, both on- and off-reserve, include the central government through its Ministry of Lands, Forestry and Mines, the Forestry Commission, administrators of stool lands, district assemblies, forest fringe communities, non-governmental organizations (NGOs), timber contractors, local landowners, and private plantation developers, both local and international actors.

4.1 Ministry of Lands and Natural Resources (MLNR)

The Ministry of Lands and Natural Resources (MLNR) has the oversight responsibility for the lands and natural resources sector. The MLNR is responsible for the sustainable management and use of all lands, forests, wildlife and all the minerals in Ghana. The ministry is headed by a cabinet minister, who is a government appointee. The objectives of the ministry include: “to facilitate equitable access, benefit sharing from and security to land and forest resources; to promote public awareness and local communities participation in sustainable management and utilisation of forest, wildlife and land use management; to review, update and consolidate existing legislation and policies affecting natural resource management and to develop and maintain effective institutional capacity at the national, regional, district and community level for land, forest and wildlife service delivery” (MLNR, 2015). MLNR houses the Forestry Commission, which is the implementing agency for Ghana's forest sector policies and programmes.

4.2 The forest commission (FC) of Ghana

The Forestry Commission of Ghana is responsible for the regulation of utilization of forest and wildlife resources, the conservation and management of those resources and the coordination of policies related to them. The Commission embodies various public bodies and agencies that were individually implementing the functions of protection, management, the regulation of forest and wildlife resources. These agencies currently form the divisions of the Commission: Forest Services Division (FSD), Wildlife Division, Timber Industry Development Division (TIDD), Wood Industries Training Centre (Forestry Commission Training School), and the Resource Management Support Centre (RMSC). The Climate Change Unit established in 2007, as a unit of the Commission has a mandate to manage

forestry-sector initiatives related to climate change mitigation, including REDD+ (Reducing Emission from Deforestation and Forest Degradation). It hosts the National REDD+ Secretariat and serves as the National REDD+ focal point. Ghana is currently in the 'readiness' phase, with preparations for REDD+ on-going since 2008 (FC, 2015).

4.3 Objective of the Forestry Commission (FC)

The objectives of the Forestry Commission includes the following, firstly 'the FC regulates the utilization of forest and timber resources. Secondly, the FC manages the nation's forest reserves and protected areas. The FC further assists the private sector and the other bodies with the implementation of forest and wildlife policies. It further undertakes the development of forest plantations for the restoration of degraded forests areas, the expansion of the country's forest cover and the increase in the production of industrial timber; and lastly to undertake such other functions as are incidental to the foregoing, or as the Minister may direct' (FC, 2015).

4.3.1 The structure and function of the forestry commission (FC)

The FC is headed by an executive director, who is mostly a government appointee. Below him/her are directors of the various units (i. e. operations, personnel, financial). The Directors of operations, personnel and finance are responsible for the smooth running of the FC. The next level in the hierarchy is occupied by forest managers at the headquarters, regions and districts. The category of forest managers here are mostly skilled, educated and senior professional foresters. Below these are the field staff made up of range supervisors/technical officers (TOs) and then forest guards. Forests reserves are directly monitored by forest guards, who live among local farmers in the forest communities. The guards are supposed to arrest or report to the district forest manager people found harvesting forest resources illegally. The Technical Officers are supposed to periodically visit forest guards at their locations. They further supervise the activities of the forest guards at the community levels. Individuals who need to extract any forest resource for non-commercial use are supposed to obtain permission from an officer of a rank not lower than assistant district forest managers (see chapter 5 on the forest policies in Ghana). This presupposes that, the guards and their supervisors TOs cannot grant forest resource access to other forest users.

4.4 District Assemblies

Since 1988, district assemblies have been the main “decision making body of local government” (Kotey et al., 1998) in Ghana. They consist of elected representatives and some nominated members from all the towns and village in Ghana. Currently Ghana has 216 districts (Ghanaweb.com). In their capacity to pass local by-laws and construct development programs, some assemblies have been very active in forestry matters. Many others, however, have treated the timber industry and, increasingly, NTFP exploitation purely as a source of revenue (Kotey et al., 1998).

4.5 Traditional council

Traditional councils are bodies composed around a "paramount chief and consist of a number of stool chiefs” (Kotey et al., 1998). The traditional councils and stools, through a combination of customary and statutory law, are generally the landholding authorities in the high forest zone (Boakye and Baffoe, 2008). As will be seen later under the forest policies in Ghana, government has by legislation assumed the right to exercise control of timber tree exploitation, despite customary and common law “ownership” of timber trees resting with the stools (see chapter 5). Successive pieces of legislation have left traditional authorities with little formal decision-making powers in forest management.

4.6 Farmers and community level institutions

Farmers in many areas are active managers of trees (Kotey et al., 1998). Trees are integrated into the “farming system through cycles of pollarding and light burning to encourage coppice regrowth” (Amanor, 1996). There is an important difference in the perspective of foresters and farmers in that foresters are concerned with primary forest species that have economic value whilst farmers’ main focus is on pioneer forest species often with much less economic (timber) value (CFMU, 1995b). Entering into and carrying out any activity within reserves is unlawful without prior written authority to the FC (See chapter 5).

4.7 Non-Governmental Organizations (NGOs)

The Ghanaian NGOs ranges from single community welfare groups to foreign NGOs (Kotey et al., 1998). Foreign NGOs have been influential with respect to donor policies in the forest sector. Friends of the Earth (FoE) Ghana are active NGOs in relation to forest management in Ghana.

4.8 Forest and Ecological zones in Ghana

These are the Evergreen Forest, Moist Semi deciduous (North West subtype), Moist Semi deciduous (South east subtype), which are considered as moist forests and Dry Semi deciduous (inner zone), Dry semi deciduous (fire zone) and southern Marginal which are considered as dry forest (Hall and Swaine, 1981; Kotey et al., 1998). The high forest zone is characterized by a wide range of fauna and flora species. The high forest zone is home to biotic elements, and also to abiotic elements such as water bodies, which serve as sources of drinking water for many rural communities in Ghana.

4.9 Forest estates in Ghana.

Most forest reservation took place in the 1920s and '30s, although some reserves were being created up until the end of the 1940s (Kotey et al., 1998). Today, about 20-25 per cent of land in the "high forest zone" is under reservation (ibid). The area permanently protected is 1.77 million hectares, of which 1.634 million hectares is under the management and control of the Forestry Department, 136,000 hectares under the Wildlife Department (FD, 1995). Of the area under Forestry Department control, recent Forestry Department categorization has divided it as shown in the table below

Table 4: Area of forest reserves in the high forest zone of Ghana

Category of forest	Size(in hectares)	percentage
Non inventoried conversion	270000	17
conversion	127200	8
Timber production area	762400	47
Permanent protection	352500	21
Convalescence	122,000	7
Total reserve area	1,634,100	100

Source: Forestry Department/FIMP, 1995

The permanent protection areas consist largely of hill sanctuaries, but also include swamp sanctuaries, shelter belts, special biological protection areas, intact forest sanctuaries, provenance and fire protection areas (Kotey et al., 1998). The convalescence areas are those with reduced stocking, but which are considered capable of rehabilitation within one felling cycle (ibid). Conversion areas require planting, and the FD proposes that the areas that were not inventoried fall into this category. The areas designated for permanent protection are forests from which logging is to be permanently excluded (FD, 1995).

4.9.1 Forest reserves

Forest reserves were created to protect watersheds and to ensure an environment conducive for cocoa production by the colonial administration.

4.9.2 The distribution of forest reserves in the high forest zone of Ghana

According to Kotey et al., (1998), there are 214 forest reserves in Ghana today. In Ghana forest reserves cover about “11% of the national territory while national parks, wildlife sanctuaries, game and nature reserves cover about 5%” (Pouliot et al., 2012). The high forest zone (HFZ) which constitutes the southern part of the country, with an extent of approximately 8.5 million hectares contains most of the forest reserves (Pouliot al., 2012; Forestry Department, 1999). The map below shows the distribution of forest reserves in the high forest zone of Ghana

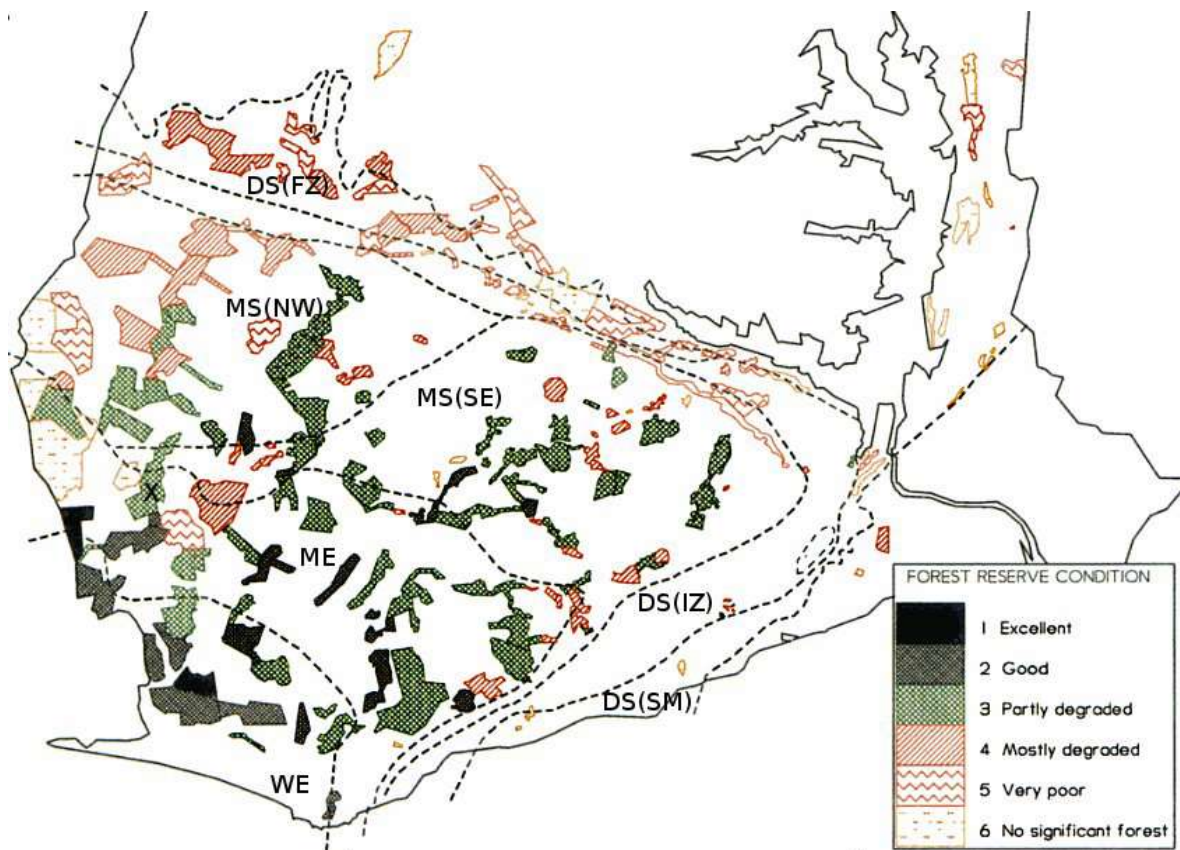


Figure 2: map showing the distribution of forest reserves in the high forest zone of Ghana

Adapted from Hawthorne and Abu Juam (1993)

Map of Ghana's forest zone, showing the status of the Forest Reserves, and the distribution of forest types within the zone. Abbreviations of forest types for each zone is as follows; WE = wet evergreen; ME = moist evergreen; MS= moist semi-deciduous. (NW = north-west subtype; SE = south-east subtype); DS = dry semi-deciduous; (FZ = fire zone subtype; IZ = innerzone subtype; SM = southern marginal).

4.9.3 Condition of forest reserves in Ghana

The conditions of all the forest reserves were assessed by Hawthorne and Abu Juam (1993). They applied a single score to summarize the general condition of all the reserves. The condition score runs from 1 to 6, with condition 1 forest reserves showing minimal signs of disturbance and condition 5 forest being seriously degraded with few upper canopy trees. Condition 6 reserves have no significant forest at all. Condition scores 1-3 refer to low to

moderate disturbance, with healthy vital parts of the forest mosaic in the ascendance and regeneration of timber trees and other forest plants usually abundant.

Well-managed, selective logging should generate condition 2-3 forest by the end of a felling cycle. Scores 4-6 are applied to forests that have suffered slight degradation over more than half the reserve or heavy degradation over more than 25 per cent of it. Very often there is poor regeneration. I use the table below to show the condition of forest reserves.

Table 5: condition of forest reserves in the high forest zone of Ghana

Number of Reserves	reserve score	Reserve condition	Area covered (ha)	Area covered as percentage of total reserve area
3	1	excellent	34600	2
25	2	good	248500	14
65	3	Slightly degraded	619000	35
41	4	Mostly degraded	361800	20
40	5	Very poor	262600	15
40	6	No forest	248000	14
Total 214			1774500	100

Source: Source: Hawthorne and Abu Juam (1993). Note: Total excludes reserves which are under management of the Wildlife Department

According to Hawthorne and Abu Juam, (1993) about half of the reserved forest, some 900,000 ha, is in “reasonable condition” and the remainder is “mostly degraded” or worse.

4.10 Forest resources as sources of revenue

In the pre-colonial era, forest resources especially timber products constituted a major source of revenue to the colonial government (Kotey et al., 1998). The situation has virtually remained the same as in post-independence era. Both timber resources and non-timber resources contribute to the nation as a whole through timber production and non-timber forest products.

4.10.1 Timber production

Ghana produces timber both for export and for local consumption. This is done by registered timber companies with registered chainsaws. The production of timber occurs both on, on and off forest reserves. Timber production takes place under strict Timber utilization contracts which are obtained solely from the Forest Commission. The European Union accounts for over 50% by volume and value of timber export from Ghana. The Timber Industry Development Division (TIDD) report on the export of wood products for December, 2013 indicated that on the direction of trade, Europe accounted for Euros 44.16 million (40.77%) from a volume of 79,660 m³ (32.43%) to be the major destination (in value terms) for Ghana's wood products export during January-November 2013. Key European markets included Germany, Italy, France, U.K., and Belgium (TIDD, 2013).

The Asia/Far East countries of China, India, Thailand, Russia and Vietnam accounted for 51,550 m³ (20.98%) valued at Euros 21.45 million (19.80%) during the eleven month period of 2013. Exports to the region were mostly Teak and Gmelina Poles/Billets as well as recent surge in Rosewood lumber (TIDD, 2013).

Africa imported wood products (mainly Plywood and Lumber Air Dried) amounting to Euros 30.26 million (27.94%) from a volume of 91,660 m³ (37.31%). Major Africa destinations included South Africa, Morocco, Cape Verde and the ECOWAS countries (TIDD, 2013).

Exports to the ECOWAS sub-region accounted for 62,564 m³ (68.24%) valued at Euros 19.56 million (64.64%) of the total African wood imports from Ghana during the period January to November 2013 (TIDD, 2013). ECOWAS wood imports comprised mainly overland export of Plywood and Lumber. The above statistics suggest that Timber production contributes to the economy of Ghana.

4.10.2 Chainsaw milling

Commercial chainsaw lumber production in Ghana has been in existence for well over three decades (Obiri and Damnyag, 2011), particularly in the forest areas of southern Ghana (Amanor, 2006). The genesis of chainsaws could be traced to the early parts of the 1980s when many Ghanaians expatriated from Nigeria came along with them (Source: interview with District forest Manager, 2014). Until the ban, that led to its criminalization in the 1990's, the practice was legal and employed well organized groups of the youth in these areas (Obiri and Damnyag, 2011). The practice has reliably supplied timber to the 'domestic market since the 1970's, when legal timber firms failed to satisfy domestic demand for lumber due to the recession or decline in the Ghanaian economy in those years' (Obiri and Damnyag, 2011). Even though it has been banned, chainsaw lumber production is currently the major supplier or source of lumber to the domestic market, accounting for about "76% of lumber stocks by volume" (Obiri and Damnyag, 2011). Chainsaw lumber is widely sold and used for construction purposes and furniture production throughout the country including government projects (Kyeretwie, 2006). It fills the wood deficit gap on the domestic market as a result of the inadequate supplies from regular mills (Obiri and Damnyag, 2011). The production of illegal chainsaw lumber and its associated trade also provide livelihoods to people in rural and urban areas (ibid: 51). However, the illegal transactions associated with the practice contribute to loss of revenue to the state (Pinar *et al.*, 2007). Annual loss in stumpage revenue from illegal sale of trees to chainsaw operators approximates to about Ghana Cedis 25 million (Marfo, 2010).

4.10.3 Non timber forest products (NTFPs) of Ghana

Non timber forest products "include any kind of fruits, nuts, honey, bark, fiber, fungi, resin, animal products or organic chemicals which originate in a forest ecosystem" (Sullivan, 2002). A wide variety of non-timber forest products play a major role in livelihood strategies in the high forest zone of Ghana. Many of the economically traded NTFPs originate from the forest reserves, whilst household-use NTFPs often originate from the farm-fallow areas (Kotey *et al.*, 1998; Mayers and Kotey, 1996). The most commonly traded NTFPs include; "foods (snails, bush meat, mushrooms, fruit and seeds); spices; chewsticks (*Garcinia* spp.); chewing sponge (made from the stems of the forest climbers *Acacia pentagona* and *A. kamarunensis*); cola nut (*Cola nitida*); charcoal; medicines (e.g. *Piper guineensis*, *Aframomum* spp, *Monodora myristica* and *Xylopiya aethiopica*); cane used in building and to make baskets,

furniture and other products (mostly *Eremospatha* spp, *Laccosperma opacum* and *Calamus deeratus*); household goods (sponges, mortars, pestles, utensils, wooden trays and grinders); food-wrapping leaves (mostly species in the *Marantaceae* family); and tool handles” (Abbiw, 1990 & Falconer, 1992a in Kotey et al.,1998). NTFPs do make significant contributions to rural livelihoods in diverse ways. Bushmeat for instance is consumed in urban as well as rural households in Ghana. The Department of Wildlife and Game estimates that about 80% of the rural population in Ghana depend on game meat (Asibey 1987 in Kotey et al., 1998). The FAO (2012) estimates that about seventy five percent (75%) of the Ghanaian population regularly consumes wild animals, mainly consisting of small mammals like grasscutters (the most popular and the most abundant among bushmeat species) and duikers (maxwell duikers, black duikers, red flanked duikers). Other hunted animals are brush tailed porcupines, giant rats, royal antelopes, bushbucks and spot-nosed monkeys. In the market of Takoradi, a survey showed that grasscutters (*Thryonomys swinderianus*) and the brush tailed porcupine (*Atherurus africanus*) composed 50 per cent of sold bushmeat biomass (Ahenkan and Boon, 2010). Although the nation does not earn significant foreign exchange from bushmeat, the local market is quite active. Ntiamoa-Baidu (1998) for instance, estimated that, every year about 385 million kg of bushmeat are harvested (US\$350 million) and 92 million kg are marketed (US\$83 million), with 60% of all sales occurring in urban areas in Ghana. A recent national survey indicated that bushmeat is becoming increasingly scarce (Ntiamoa-Baidu 1998).

Further the finding of Leach et al., (1999) about *Marantaceae plants*, which are commonly collected by women during the rainy seasons in Ghana, contributes to rural livelihoods. The leaves of the *Marantaceae* plants are sold and used widely for wrapping food, kola nuts and other products. Leach et al., (1999) further contends that the utilities derived from the cash sale of *Marantaceae* leaves a non-timber forest product, offers a timely source of rainy season income especially to women.

Further, Canes, which are derived from the stems of various climbing palm species, are widely used to produce household and commercial goods (Kotey et al., 1998). The most common products are baskets. Falconer (1992b) estimated that over 90 per cent of all households in southern Ghana owned an average of 3.4 baskets. The market for cane furniture is ever-increasing (Kotey et al., 1998).

4.10.4 off reserve forests in Ghana

Considerable forest and timber resources are found outside the reserves (off-reserves). The off-reserves comprise a mixture of agricultural lands (farmlands) with naturally occurring timber trees and patches of natural forest (Amanor, 1996). This area is important for commercial timber production, as well as for livelihoods of forest communities (Boateng et al., 2009). Intensification of farming activities and timber harvesting has reduced the number of trees and remaining forest patches in the off-reserves.

To sum up, the MLNR has the oversight responsibility for lands and natural resources in Ghana. The FC reports to the MLNR. The FC manages the nation's forests. The structure of the FC includes both professional foresters and government appointees. The forest guards are the lowest in the hierarchy of the FC. They monitor the forests and report any illegal activities to the District Forest Manager. The Technical Officers supervise the activities of the forest guards. In principle the forest guards cannot grant access to the forests. Other institutions and stakeholders in the forestry sector include the District Assemblies, the traditional council, the local farmers and NGOs both local and international. Ghana has 214 forest reserves. About half of the forest reserves are in reasonable condition and the remainder is mostly degraded or worse. Forest resources play a significant economic development in the nation as a whole. Timber production brings foreign exchange to the nation and creates employment. Chainsaw milling even though banned by law accounts for the gap in the domestic market as a result of the inadequate supply from the regular mills. Non timber forest products derived from the forests provides food, income for rural households. Off forest reserves serves as lands for agricultural intensification and timber production. The ownership and use rights of forests and trees are very complex in Ghana. The above review of literature has shown that the forest resources are vital to the livelihoods of many and the nation as a whole. And that many actors both national and international are much interested in the forest resources of Ghana. The next chapter explores how the emergence of forest policies Ghana, has set the stage for the mechanisms of forest resource access and control.

Chapter 5

Construction and Contestation of space: forest policies as setting the stage for the mechanisms of forest resource access in Ghana

It is worthy of notice that, in Ghana ownership of land does not necessarily imply the ownership of and right to fell, extract and convert logs into lumber without permission from FSD. It is therefore illegal and an offence to fell timber, convert it into lumber and convey it to the market without the relevant permission stipulated by law (Kotey et al., 1998). In this chapter I look at the context and the reasons within which forest resource policies in Ghana emerged. Abrams (1982) in Leach et al., (1999) noted that “History is central and necessary to sociological enquiry, as the lens through which the relationships between agency, structure and power - or social actors and institutions become apparent”. I argue that the construction of forest policies in Ghana has led to the mechanisms of forest resource access, both formal and informal.

5.1 Pre-colonial Era

During the pre-colonial period, there were no documented forest policies but, local communities were conserving and protecting some forests (Owubah et al, 2001). These reserves were mostly forests left at the banks of water bodies and sacred grooves (Kotey et al, 1998). The conservation of these forests was mostly enhanced by religious beliefs. The management or conservation of these was based on unwritten community by-laws (Owubah et al, 2001) which were formulated based on traditional religious belief systems that emphasized harmony between the community and the trees. The power wielded by the traditional rulers, made the conservation of the sacred grooves intact. This is supported by the finding of Hawthorne and Abu Juam (1995) that the sacred grooves are still intact and are often better preserved than other reserves. Mayers and Kotey, (1996) contends that the sacred grooves contain the rarest species in Ghana today. There was no evidence that the community by-laws were able to prohibit exploitation of the forests outside them. The early trade with the European merchants consisted largely of gold, slaves and kola (Parren and DeGraaf, 1995). Forests products also played a significant role in the trade with the European merchants especially when the slave trade was abolished. Wood products exported included ebony, bar wood and some redwood species (Reynolds, 1974 in Teye, 2008). Non

timber forest products such as cola nuts were also exported to Europe by the European merchants from the then Gold coast. The oil palm was one of the first export commodities to reach Europe from the Gold Coast and Nigeria (Parren and DeGraaf,1995) initially from stock, but soon afterwards from plantations. It is worthy of notice that the pre-colonial international trade was possible because it served the interest of both the traditional authorities and the European merchants. The traditional authorities were interested in the merchandise products such as guns and gun powders to at least protect and or to extend their territories or governable spaces. This is due to the fact that before colonialism, power in the then Gold Coast was divided among traditional rulers, who governed different territories (Oppon, 2004). On the other hand the European merchants had economic interest in forest products especially after the abolishment of slave trade. This presupposes that the exploitation of wood and non-timber forest products was possible because the traditional authority consented. The argument that exploitation of wood or timber in Ghana occurred before colonialism is therefore in line with the findings of Fairhead and Leach (1998) that portions of Ghana's forests were destroyed before the advent of the 20th century.

5.2 The early colonial period (1874-1900)

One of the main reasons for British imperialism in the then Gold Coast can be seen to an extent as purely for economic gains. To advance the economic gains, the British colonial government in the then Gold Coast turned its interest to valuable forest products (Parren and DeGraaf, 1995) in other to maintain and sustain the newly established British Colony. The administration focused its interest on controlling lands in other to gain natural resource revenue (deGraasi, 2003). The colonial administration to push this interest further, in 1894 created the 'crown land'. This legislation, which later became known as the Crown Lands Bill of 1894, was framed in the form of a law. It vested all 'waste and uncultivated forestlands' in the colony to the British crown. Bowing to pressure from the local population under the leadership of the Aborigines Rights Protection Society⁶, the bill was fiercely resisted (deGraasi, 2003:3). The reasons being that, there were no land that could be categorized as unsettled or 'uncultivated' (Asante, 2005) and that it ignored the fact that natives had inherited the lands from their ancestors (Teye, 2008). Three years later in 1897, another bill was enacted- the lands Bill of 1897. This bill sought to regulate the administration of public lands. This bill according to Asante (2005:63) enabled the

⁶ The Aborigines Rights Protection Society consisted of chiefs and educated local elites

establishment of a “concessions court with the main function of vetting contracts made between the government and private exploiters of forest resources, particularly timber merchants”. Again strong opposition from the indigenous population, who viewed this bill as an attempt by the colonial authorities to seize their lands, forced the abandonment of this bill (ibid: 64).

5.3 Periods of forest reservations

Chipp in his forest officers’ handbook contended that savannization would eventually result in the “practical disappearance of cocoa, kola and oil palm industries as commercial ventures” (Chipp, 1922:47 in deGraasi, 2003:4). Further, Oliphant (1932:6 in deGraasi, 2003) noted that “water supplies and agriculture depend upon the forests”. Environmental crises narrative encouraged by Chipp and these other foresters had an impact on forest policies even though these narratives I think did not have strong scientific backings. These foresters I think were perceived as “knowledgeable actors” (Ledyae, 1997) who know the environmental effects and costs of deforestation. This brought to the fore, the first regulation by the colonial administration to control harvesting of timber known as the Concession Ordinance of 1900. In 1907, a Timber Protection Ordinance was passed to prevent the felling of immature trees (Troup, 1940). According to deGraasi (2003:6), the colonial government early in 1909 invited Mr. H.N. Thompson of the earlier established Nigeria Forest Services to look into Ghana’s timber trade and related matters. Thompson submitted a report, stipulating the need for ‘enactment of forest legislation, the protection of trees and timber, and the issuance of property marks to timber operators. To give effect to the above, he recommended that a Forestry Department be established with a mandate spelled out in forest policy. His recommendations were accepted by the colonial government and a small forestry department was created in 1909. A Timber Protection Ordinance was passed in 1909 and further in 1911, the first Forest Ordinance was enacted. This ordinance provided for the reservation and protection of forests (Kotey et al., 1998). deGraasi (2003) noted, that the Timber Protection Ordinance and the first forest Ordinance could not be implemented, as they were rejected by the local people as attempts to usurp their land rights. The increases in resistance made the colonial administration to employ the tactic of persuasion to enable the natives comply by undertaking forest reservation under their own by-laws (Kotey et al., 1998). Persuasion as a form of power was used in this instance. According to Wrong (1988), *persuasion* exists when the ‘power holder presents rational arguments that appeals to the subject’. Through the tactic

of persuasion the colonial administration was able to pass more legislative instruments to guide forest reservation and management in consultation with the chiefs. This resonates with what Latour (1996) noted that in the “process of translating ones ideas and interests, the possession of power does not automatically ensure success unless others can be persuaded to perform the appropriate actions for this to occur”. Resistances to reservations were overcome by the late 1920s and 1930s (Kotey et al., 1998). Three legislations were passed as a result, namely the native authority ordinance, the forest ordinance and the concession ordinance, and this are discussed below.

5.3.1 The Native Authority Ordinance of 1927

This ordinance empowered native authorities to constitute forest reserves under their own by-laws. This led to the formation of a local government, the “Native Authority” made up of a paramount chief and his traditional council of elders. Forest reserves under the native authority by-laws were managed by the owners under the advice and direction of the forestry department (Kotey et al., 1998). Most forests in Ghana today were constituted using the provisions of the Native Authority Ordinance (Kotey et al., 1998). By 1944, 127 out of the 200 existing forest reserves were created using the Native Authority Ordinance (deGraasi, 2003).

5.3.2 The Forest Ordinance 1927

This act empowered the government to constitute reserves on any land, even if it was against the will of the land owning community (Kotey et al., 1998). The constitution of an area as a forest reserve did not affect the ownership of the land. However the control and management of the forest reserves was exercised by the Forestry Department for the benefit of the local people.

5.3.3 The Concession Ordinance, 1939.

It provided for a system of grants of timber harvesting rights and the determination and collection of revenue over both reserve and off-reserve forest by the traditional land and forest holding authorities. This ordinance according to (Kotey et al., 1998) gave the traditional authorities rights to collect royalties or revenue on timber products harvested from both reserve and off-reserve forests. Traditional authorities by this ordinance further negotiated timber concession agreements with logging companies directly (Kotey et al.,

1998). Amanor (1999: 51) contends that the, “Chiefs had incentives to constitute forest reserves, as they came to realize that reservation would benefit them financially since they could gain valuable revenues from royalties, which would be lost if local citizens took up the land for farming purposes.”

5.4 Late colonial period (1939-1957)

Much attention was now focused on exporting timber (Kotey et al., 1998) as the initial reservation plan was abandoned (Ministry of lands and Forestry, 1994). Foggie, a Chief Conservator of Forests had earlier on stated explicitly that “the reserves established for protective purposes also serve for productive purposes without detriment to their protected roles” (Foggie1962: 232).Further according to deGraasi (2003) Moor, a chief Conservator argued in 1935 that “A forest reserve is not a museum piece to be looked at, but not touched, it is something to be worked. When any commercial industry creates the demand, the reserve is there to satisfy it ...” The change in reservation to exploitation was further enhanced by the increasing demand for timber products during and after the World War II (Kotey et al, 1998). Export demand was so high that some tree species, such as Wawa (*Triplochiton scleroxylon*), which were hitherto not exported, were exported from Ghana (ibid).

5.4.1 The 1948 Forest Policy

The 1948 Forest Policy focused on the management of forests reserves on a sustainable yield basis, and also laid much emphasis on the exploitation of valuable timber outside them.

The main objectives of the 1948 Forest Policy were:

- Conservation and protection of the forest environment i.e. protection of major water catchment areas, maintenance of a micro-climate for production of major agricultural crops
- Management of the permanent forest estate on a sustained yield basis
- Promotion of research in all aspects of scientific forestry

The colonial administration prioritized massive logging outside reserves, since it was argued that such timber, if not harvested, would be destroyed by local farmers when extending their farms (Kotey et al., 1998; deGrassi, 2003). This led to the enactment of the Trees and Timber Ordinance and the Local government Ordinance to prevent local people from destroying the forests.

5.4.2 Trees and Timber Ordinance No 20, 1949

This ordinance aimed at regulating and controlling the timber trade through registration and issuing property marks to holders of concessions. Under the ordinance, loggers had to be issued with licenses and permits before they could log in the forests. This Ordinance made it possible for the state to maximize benefits from timber exploitation.

5.4.3 Local Government Ordinance, 1951 (No 29)

This ordinance created elected local councils, which took over the responsibilities of local governance and administration and rendered the native authorities redundant. It also marked the ‘beginning of the decline in the participation and influence of the traditional land and forest holding authorities in forest management’ (Kotey et al., 1998). The chiefs, however, as custodians of the stools, still retained decision-making authority over land use. This further complicated relationship between the Forestry Department, chiefs and local people and worsened problems encountered with the management of reserves constituted under by-laws. While this policy was justified by the need to promote local democracy and share forest revenue more equitably (Mayers and Kotey, 1996), the actual reason might be that the colonial government wanted to control revenue collected by the chiefs.

5.5 1957-1994 post-independence era

Nkrumah’s indigenization policy shaped policies of forest management to some extent. “Nkrumah urged domestic processing of timber, regulated and nationalized the timber industry, and prioritized cutting of forests in order to establish large food plantations and generate revenue” (deGraasi, 2003:10). Nkrumah’s indigenization policy led to an increase in the number of timber firms from 121 to 361 by 1967 (Mayers and Kotey, 1996). Sawmills also increased from 43 in 1960 to 61 by 1970 (Gillis, 1988). Industrial wood production (in million cubic meters) increased from 1.14 in 1955 to 1.83 in 1960 and then to a peak of 2.05 in 1973 (Page, 1974; Gillis, 1988). The high exploitation rate continued but declined in the late 1970s due to the ‘global economic recession and lack of inputs in the timber industry, which caused most local timber firms to collapse’(Kotey et al., 1998). Exploitation started growing again in 1984 as a result of the inflow of foreign capital, and later by the Economic Recovery and Structural Adjustment Programs (Kotey et al, 1998). Legislative instruments adopted in this era focused on restricting forest communities' user rights rather than sustainable management in general.

Many laws were therefore enacted to strengthen government controls over trees in off reserves forests. I discuss these below

5.5.1 Protected Timber Land Act, 1959

This act sought to give the Forestry Department power to control and regulate farm expansion in heavily forested areas outside forest reserves. Forestry officers were therefore engaged in protection duties of both unfarmed areas and of trees on farms. The performance of these tasks, made the local farmers ascribe “the forestry officers statuses as agents of the national timber industry and trade, who were gradually replacing the chiefs and the local people as the main beneficiaries of the forest resources” (Kotey et al., 1998). The implementation of this policy was fiercely resisted by local farmers.

5.5.2 Administration of land Acts, 1962 and The Concession Act 1962

These acts, Administration of Lands Act, 1962 and the Concessions Act, 1962 vested the rights to forest and forest land in the President in trust for the stools concerned, and effectively placed the government in a decision making position over land use and revenue collection and distribution. This presupposes that the rights of chiefs to negotiate concessions on their own lands were lost as the matter was now dealt with by the government department responsible for stool lands. The government therefore granted concession without the knowledge of the natives as if they had no rights over timber trees growing on their own lands. According to Kotey et al., (1998), the farmers felt even more alienated and saw concession holders as agents of the Government, protected and actively helped by the Forestry Department to do whatever they wanted on people’s land and farms.

5.5.3 Forest protection decree, 1974

With central control over forest resources by and large established by the 1960s, all that the successive political regimes did was to build upon it to appropriate valuable forest resources. The Forest Protection Decree (1974) was passed to prevent local people from entering the forests without permission. It was introduced because it was thought that some of their activities could lead to destruction of valuable trees. Local communities now had to obtain permission from the forestry department before they could enter the forest reserves even for non-timber resources they needed for subsistence. On the other hand, these communities are the actual owners of such lands and reserves according to the Forest Ordinance Act, 1927.

5.5.4 The Trees and Timber Decree (1974)

This act according to the (Ministry of Lands and Forestry, 1994) made it possible for the chief conservator of forests to divide Ghana's forests into appropriate areas and to allocate a distinctive mark to be known as locality marks. These locality marks were monitored publicly by the Chief Conservator of Forests. This act further made it illegal for a person to cut timber without a registered property mark and that the marketing or the exports of such logs were subjected to stiffer punishments. This act established that it was a crime for a person to fell a tree for export without a valid property mark. Through this decree the government was able to extend its control greatly over use and access rights even in non-reserve forests.

5.5.5 Trees and Timber (Amendment) Law, 1983 and Forest Protection (Amendment) Law, 1986

The Trees and Timber (Amendment) Law imposed stiffer penalties for violation of the Trees and Timber Decree. The Forest Protection (Amendment) Law imposed higher punishments for violation of the Forest Protection Decree. These statutes laid more emphasis on how to prevent local people from using forest resources. These statutes further deterred local people from exploiting trees without a permit while giving timber companies the opportunity to exploit them since the companies could afford the permits.

5.6 1994-present

The ITTO Target 200 which proposes that member countries of the ITTO were to source timber from only sustainable managed forests by year 2000 (ITTO, 1992) and the 1992 Rio Declaration in the context of securing sustainable forest management, exerted some pressure on the Ghanaian government to revise its forest policies (Ministry of Lands and Forestry, 1994). The World Bank Preparatory Mission for the Forest Resources Management Project (FRMP) also called for a new forest policy, on the grounds that the 1948 forest policy was ineffective in reducing rapid forest loss (Kotey et al., 1998). Following this intense pressure especially from the international community the Ghana Forestry Commission was established in 1993 under the Forestry Commission Act 1993 (Act 453). The commission is the main government institution that coordinated the formulation of new policies. According to Kotey et al (1998), the commission was initially made up of people drawn from all the sections of the economy but excluded local farmers. This also led to the 1994 forest and wildlife policy.

5.6.1 The Forest and Wildlife Policy, 1994

The main aim of the 1994 Forest and Wildlife Policy was the “conservation and Sustainable management of forest and wildlife resources so as to maintain high environmental quality and ensure equitable distribution of optimum benefits to all segments of society” (Ministry of Lands and Forestry, 1994). The main objectives of this policy according to the Ministry of Lands and Forestry (1994) were the following:

- 1, “To Manage and enhance Ghana's permanent estate of forest and wildlife resource for preservation of vital soil and water resources, conservation of biological diversity and the environment and sustainable production of domestic and commercial produce”
- 2, “To Promote the development of viable and efficient forest-based industries, particularly in secondary and tertiary processing, so as fully utilize timber and other products from forests and wildlife resources and satisfy domestic and international demand for competitively-priced quality products”
- 3 “ Promote public awareness and involvement of rural people in forestry and wildlife conservation so as to maintain life-sustaining systems; preserve scenic areas to enhance the potential of recreation, tourism and income-generating opportunities”
- 4 “Promote research-based and technology-led forestry and wildlife management, utilization and development to ensure resource sustainability, Socio-economic growth and environmental stability”
- 5 “Develop effective capability at national, regional and district levels for sustainable management of forest and wildlife resources”.

The 1994 forest and wildlife policy acknowledged the rights of local people to have access to basic forest resources which they needed for their livelihoods.

5.6.2 Trees and Timber Amendment Act, 1994 (Act 493)

This act makes provision for the renewal of property marks and the use of levies and other forest fees in the regulation of the timber trade (FC, 2015). Under this Act, levies have been imposed on the export of logs and the fee for the renewal of property marks substantially increased.

5.6.3 The Forest Sector Development Plan, 1996

This plan was designed to guide forest management up to the year 2020 (Ministry of Land and Forestry, 1996). It consists of a comprehensive plan with strategies, proposed actions, inputs, outputs and time frames for implementing the Forest and Wildlife Policy.

5.6.4 The Timber Management Regulation 1997

This act makes it an offence for anybody to harvest timber both on and off reserves unless the person holds Timber rights in the form of a Timber Utilization Contract. Under this act individual and stool lands could be subjected to contracts (FC, 2015). According to Kotey et al., (1998) this policy became very difficult to implement since the local people were not cooperating. This led to the timber management regulation in 1998

5.6.5 The Timber Resource Management Regulation 1998

This is an act that provides for the granting of timber rights in a manner that secures the sustainable management and utilization of timber resources. This act prohibits the harvesting of timber without a timber utilization contract (FC, 2015). The act further proposes that ‘unallocated public or stool lands suitable for timber operation may be subjected to Timber Utilization Contract with written authorization to the owners thereof’ (ibid). The written authorization to the owners thereof reiterates the notion that local communities are seen as the owners of the land indeed but use and access rights resides with the Forest commission (FC). All the FC needs is the concern of the owners after which it proceeds with the issuance of timber utilization contracts to the timber companies. A legislative instrument (1649) further decreed a ban on the use of chainsaws to convert trees to lumber. The ban aimed to protect the off-reserve trees as well as to try and improve the efficiency of conversion of felled wood into lumber which is notably low when using a chain saw.

5.6.6 Forest Plantation Development Act 2000

This act sought to embark on forest plantation schemes, especially in highly degraded forests. It sought to provide financial assistance for the development of private forest plantation on lands suitable for commercial timber production and for research and technical advice to persons involved in commercial plantation forestry on specified conditions (FC, 2015). It

consisted of a board of several people from the Forestry Department and the Ministry of Lands and Forestry; still local people were not involved (Kotey et al., 1998).

5.6.7 Forest Protection Amendment Act 2002

It's an act to amend the Forest Protection Decree 1974 (NRCD 243). It sought to provide higher penalties for offences such as farming in the forest, cutting a tree, setting fires in the forest, obstructing a river, hunting and the conveying of any forest produce without a permit. It stipulates that culprits may face a fine or face prison sentence not exceeding two or three years. This act further prescribes that a forest officer not below the rank of assistant District Forest Manager who is able to take decisions on behalf of the executive director of the forest commission must be consulted by local forest users who wants to access the forests. It was enacted to deter local people from entering the forest directly.

5.6.8 The Forest Law Enforcement Governance and Trade (FLEGT) Action Plan

A Forest Law Enforcement, Governance and Trade (FLEGT licensing scheme) was established between the Europe Union and Ghana. It establishes a set of procedures and requirements aiming at verifying and attesting, by means of FLEGT licences, that timber products shipped to Europe were legally produced. In accordance, the European Union (EU) shall only accept timber from Ghana for import into the EU if they are covered by FLEGT licences.

Forest policies enacted during and after colonialism has been able to achieve quiet some success with respect to conserving some local lands as forest reserves. Currently Ghana has two hundred and fourteen (214) forest reserves (Kotey et al., 1998). The construction of forest policies have reserved the use and access rights to trees both on reserved and off reserved forests exclusively to the central government of Ghana. Further stool lands and forests both reserved and unreserved have also been vested in the central government. The right to grant timber concessions by chiefs were rescinded and vested into the state (see Administrative Land Act, 1962 and Concession Act, 1962). An extension of the suppressive effects of the colonial forest policies were built upon after independence by the successive governments. Several acts were passed to prevent local people from entering the forest without permission. This was further aggravated when it was made a crime for any person to fell a tree without permit (see Forest Protection Decree 1974 and Trees and Timber Decree

1974). Meanwhile local people are seen as the actual owners of the lands and its resources (see Forest Ordinance, 1927).

The marginalization of local farmers which started in the later part of the colonial period gained grounds in the post-colonial era. I argue that the marginalization of local forest users in gaining access to the forests began with the emergence and construction of forest policies in Ghana. And I further contend that, the construction of forest policies in Ghana has set the stage for the contestation of space (forests) between the government represented by forestry commission and the local forest users. The contestation of space (forests) between the forest commission and the local forest users have led to the mechanisms of forest resource access, both formal and informal. The formal means include gaining access to the forests through a permit system from the Ghana Forestry Commission. On the flip side, the forest governance policies intended to regulate and to ensure the sustainable management of the forests is serving as springboards to some extent for local forest users to put up crafty ways and strategies to access and benefit from the forests. As noted earlier in the abstract, this strategies and tactics by local forest users to access the forests and its resources thereof is what I refer to as manoeuvrings in this study.

In summary, through indirect rule, the colonial administration was able to implement more legislatives to conserve and manage some native lands as forest reserves. By relying on environmental crises narratives, the indirect benefits of forest and the tactic of persuasion, the colonial administration was able to conserve and centralized the access and use rights to the forests. On the other hand, this process wasn't all that smooth as the colonial administration faced fierce resistance from the local people who resisted such advancements as attempts to usurp their lands rights. The successive political regimes after colonialism depended on the already existing centralized system established by the colonial administration to further marginalize local people from benefitting from the forests directly. The quest by the colonial and successive governments after colonialism to manage the forest has led to the marginalization of local forest users through the construction of forest policies. I argued that the forest polices has set the stage for the mechanisms of access to the forests, both formal and informal to the forests. With this background the next section explores the tactics that local forest users employ outside the permit system to access and benefit from the forests.

Chapter 6

The Maneuvering tactics of forest resource access and control

This chapter discusses the manoeuvring tactics activated by the forestry officials and the local forest users to benefit from the forests. It further looks at issues such as who determines access, who gains access and who loses out on access.

6.1 Who grants access, who gains access and who loses out?

The cast of actors this study concerns itself with in granting, gaining and losing out on forest resource access ranges from the state to the local level. The actors from the state include the Forestry Commission (FC) represented at the local level by the Forest Guards (FG) and their supervisors known as the Technical Officers (TOs) or the Range Supervisors. The forest guards are mandated by the Forest Commission to protect and to report any illegal activities done in the forests to the District Forest Manager. They mostly reside in the forest community. The Technical Officers sees to it that the forest guards discharge their duties to the benefit of the Forestry Commission. Local level actors are the forest farmers and the chainsaw operators. Gaining access to forest resources is done through ‘permits’ obtained from the FC. Any form of access gained to the forests without a permit is considered as illegal. This study is concerned much with the illegal or informal mechanism of gaining access and benefitting from the forests. This study found that, at the more local level, the forest guards are the major actors that determine who gains access and who loses out on access to the forests. Through in-depth interviews it was found that any form of access gained without the knowledge of the forest guards is subjected to forest user conflicts that arise between the local forest users and the forest guards.

It further appeared that, forest farmers who had gained access and were already farming in the forests, grants access to ‘new farmers’. These forms of access were based on friendship, family and religious ties. I use the extract below to show this

Kofi, year old forest farmer said this during an interview

When I decided to farm inside the forests, I contacted my uncle who had already gained access through the forest guards and was farming inside the forest. I contacted my uncle because I had a very good relationship with him. My uncle granted me access in the form of a piece of land beside his farm. Together with my uncle, we later went to see the forest guards with some gifts to prevent future damages to my crops.

The above extract presupposes that firstly even though the forest guards appears to be the “bosses” of the forests, forest farmers also grant access to the forests. Secondly, this form of access is based on friendship and family ties and lastly this form of access is subject to forest user conflicts unless the forest guards agree. The forest farmers further grant access to chainsaw operators by showing them trees on their farms inside the forests.

Chainsaw operators are active actors at the local level in relation to forest access. Chainsaw operators have been banned by law and their activities have been branded as illegal. It appeared from the interviews and observations that the chainsaw operators have two strategies of gaining access to the forests. Firstly, they gain access on their own and through forest farmers who shows them trees on their farms inside the forests. Secondly, they gain access through the forest guards through a practice I have labeled as ‘the cash and carry system’. The first form of access is subjected to conflicts with the forests guards when they are caught inside the forests. This study found that, if they are caught ‘illegally’ accessing the forests, they negotiate and pay money to the forest guards to be set free. The second form of access which is the ‘cash and carry system’ operates on the two notions; firstly, that chainsaw operators pay an amount of money usually between 100-300 Ghana cedis to the forest guards to gain access. This money is paid per access. Secondly, the chainsaw operators when caught assessing the forest without the forest guards concern must pay 300-600 Ghana Cedis or they face the risk of their machines being seized.

Chainsaw operators and forest farmers who loses out on access are those who can’t mobilize their endowments to play according to the demands and the strategies of the forest guards in gaining access. The forms of arrangements between the forest guards and the local forest users determine who loses out on access. Local forest users have to mobilize their endowments (rights and resources) to be able to gain access to the forests through the forest

guards. Inability of a forest user such as a forest farmer or a chainsaw operator to overcome the rules of the day which revolves around the forest guards leads to access failure.

6.1 *The manoeuvring tactics to benefitting from the forests*

I discuss both the mechanisms and the maneuvering tactics that enables local forest users to benefit from the forests. Chainsaw operators and forest farmers form social relations with forest guards. Embedded in these social relations are issues of reciprocity, bribery and negotiations which enable both the forest guards and the local forest users to thread new pathways in relation to the forests. I have categorised the mechanisms that local people use to get access into formal and informal means.

6.2 *Formal means*

The Formal means of access occurs when ‘permit’ is obtained from the forest commission to be able to access the forest. None of the informants interviewed have ever used permits to get access to the forest before. Through the interviews, it was revealed that gaining access to the forests by obtaining a permit was a very bureaucratic and costly venture to undertake. I use the case of the head of the chainsaw operators, Mara a 52 year old man to show the bureaucratic process and the cost of gaining a permit;

We have to see the forestry department in order to get approval or permit. Now you go there and you don't get a chance... I paid 1500 Ghana cedis but still no paper (permit). A customer wanted some sawn lumber for his work in Accra. He came to me and we went to the District Forestry Department for permit. We were told to come back the following week. We went and according to certain procedures we were supposed to pay 1800 Ghana cedis which we did. Getting a permit involves a lot of paper work. It's been 9 months now since we applied for a permit. We are still waiting. As you can see we stay closer to the forests than to the forest department's office. Whenever I need something inside the forest, I have to go to the district capital where their office is located in order to get a permit. My brother this too much cost you understand right? (Smiles and i nod my head).

The above case shows the bureaucratic nature of getting a permit to access the forests from the perspectives of the local forests users. The longer time it takes to get a permit appears to be an access barrier to the local forest users. Further the cost involved in getting a permit appears to be an access barrier from the perspective of the local forest users. As can be seen

from the above case, Mara paid money in order to get a permit to access the forests. It eventually ended up that he is still waiting for the permits. I managed to talk to him on phone as a follow up, but he said he was still waiting to get the permit. Hence the bureaucratic nature of getting a permit together with the cost involved appears to be a barrier of access for the local forest users who then invest in informal tactics and mechanisms to manoeuvre forest resource access.

6.3 Informal means

A myriad of informal contacts and arrangements between the forest guards and the local forest users determines the overall mechanisms of access to the forests. Informal means are the main access mechanisms that local actors activate to get access to the forest. These informal means includes the following:

6.3.1 Social relations

Social relations are vital for communal living in Ghana, with Bepposso, the study area being no exception. The study found that social relations between the forestry officials and the local forest users are vital to gaining access to the forests in Bepposso. Asked about how he gained access to the forests, Kakai forest farmer said that;

'If you make the car driver your friend, you don't get stuck in the middle of the road. We build good relationships with the forest guards. This enables us to get access to the forest.'

The metaphor *car driver* here suggests the forest guards. Also the phrase *don't get stuck* suggests that by having good social relations with the forest guards the local forest users will definitely get access to the forest.

Further this study found that, social relations based on ethnic and religious affiliations are employed by local forest users to manoeuvre forest resource access. Kato a forest farmer said that;

He (forest guard) is one of us; we are from the same tribe, so we are brothers. I go to him (forest guard) and tell him I need a place to farm. He then gives it to me but tells me to plant trees in the land he was going to give to me

Issues of ethnic background and religious affiliations appear to be some of the tactics that local forest users activate to get access to the forest. The use of the word *tribe* and *brothers*

by local forest users makes it difficult for the forest guards to deny their own people access to the forests.

Further social relations based on kinship and family ties are used in getting access to the forests. Farmers who want to farm see other farmers who are already farming in the forests to give them a place to farm. However this type of access has been one of the causes of the forest user conflicts between the forest guards and the local forest users (see section on forest user conflicts).

6.3.2 Issues of reciprocity

The idea of reciprocity brings to the fore actors, their mutual dependencies and benefits. The forest guards live among the local people in the forest community. Even though they have the map of the forest area, it is very difficult to identify in practice the boundaries of the forest reserves. The boundaries between the forest and the lands of the natives have fused such that it's very difficult to identify with ease.

In the words of Kojo, a forest guard; *the local people have stayed in the community for long and they know the 'beats'⁷. They therefore help us to locate and to clear these beats. After which they demand of us to give them a place to farm. We have no option than to give it to since they have helped us. But we tell them to plant trees together with their foodcrops.*

Further interviews with the forest farmers also revealed that in order to get access to the forest, they willingly help the forest guards to clear the beats. This then enables them to get a place in the reserved forest to farm. During an interview, Yaw a forest farmer said that:

Hands go...hand come, I help you, and you help me. They (forest guards) don't know the forest boundaries. They have the map, but it's a different issue on the ground. We show them the boundaries and help them to clear them. By so doing we tell them to give us a small piece of land to farm, which they comply.

The willingness of the forest farmers to help forest guards clear the beats is a tactic by the former that enables the latter to comply. This suggests that the forest farmers are aware that, the forest guards have authority over the forests in Bepposso. The forest farmers willingness to help the forest guards and their acceptance of such helps, suggests that arrangements,

⁷ 'Beats' are the boundaries between the forest reserves and the land of the local people.

negotiations and agreements exist between the forest guards and the local forest users. The forest guards and the forest farmers are complying due to the reward each will get from their reciprocal interactions. This reward is seen in the forest guards being able to locate and clear the beats which translate into them discharging their duties as mandated to them by the Forestry Commission. This reward is also seen in the ability of the forest farmers gaining access to lands in the forests to farm. It therefore appears that, issues of reciprocity are the screens that occupy vision whenever the local forest users and the forestry officials meet in relation to identifying and clearing the beats. The investment in these reciprocal relationships enables the local forest users to gain and maintain their access through the forest guards in order to benefit from the forests and its related resources.

6.3.3 Bribery and negotiations

The notion of negotiations brings to the fore notions of unequal power relations among different actors with multiple interests. Through interviews, and seeing through the eyes of both the forest guards and the local forest users, it seems that negotiations are entered to tread new pathways. This new pathway is reflected in the local forest users gaining access to the forest resources. In the study area, further interviews with forest farmers shows that they negotiate forest access through the exchange of gifts and payment of money to the forest guards. This is what Michael 45 year old forest farmer said when asked about how he gets access to the forest:

We form a group, we make contributions and then we give it to the forest guards. I personally contributed 50Ghana cedis last month. This then enables the forest guards to grant us access to the forest in the form of a land to undertake farming activities.

Further, through interviews it was revealed that the chainsaw operators employed the tactic of negotiations in their dealings with the forest guards. These negotiations occur through the payment of money. I use the extract from Joe, chainsaw operator when asked about how he gets access to the forest to show this:

Gaining access to the forest is involves two things: its either you enter the forest and start felling the lumber directly. In this case if they (forest guards) come around you should have about 500 Ghana cedis ready. Or you see the guard; pay him money before you go into the forest to start your operations.

It appears that the ‘illegal’ chainsaw operators employ negotiations and payments of money to the forests guards as a strategy in order to get access to the forests to gain trees to saw for lumber.

Further, this study found that, the telling and retelling of histories backward in time and in space serves as a springboard for the local forest users to present money and gifts to the forest guards in order to benefit from the forests. From the interviews, many local forest users noted how their grandparents and parents had farmed in the forests since time immemorial and had left them farms inside the forests. In order to continue and maintain their access to these farms, they present gifts and money to the forest guards. These gifts and money then allows them to continue farming inside the forests

Also, this study found that, identity discourses of nation and citizenship are used as a justification by local forest users to presents gifts and money to the forest guards in order to benefit from the forests. I use the extract below from Asenso, a forest farmer to show this

“We are all Ghanaians and the forest belongs to us all. Therefore being aware of the role of the forest guards, I present money and gifts in the form of chicken and foodstuffs to them. By so doing I am able to gain access and benefit from the forests”.

The above extract presupposes that by relying on notions of nation and citizenship, forest farmers are able to present gifts and money to influence the forest guards to grant them access. During the fieldwork the local people noted how they have been staying in the forest community for long. They therefore use that as a justification to manoeuvre forest resource access through the forests guards.

This study further found out that, the local forest users willingly present gifts and money to the forest guards. Through these, the local forest users are able to influence the actions of the forest guards in the discharge of their duties. The gifts and money enables the chainsaw operators and forest farmers to gain access and to benefit from the forests. The extract below from Kese a chainsaw operator shows this:

“Assuming that there are kids in the house, who are hungry, and you have food, but you are not around. What do you expect your kids to do? They will eat the food. My brother there is no other jobs for us to do. We have families to take care of. I therefore wilfully present gifts and money to the forest guards to gain access”

From the above extract, the word *food* here suggests the forest. The phrase *the hungry kids* represents the local forest users. This shows clearly how the local forest users gain access to the forest by bribing the forest guards who also accept those bribes. Bribing the forest guards therefore appears to be an access mechanism employed by local forest user to overcome the barriers imposed by the forest governance policies. This strategy then enables the local forest users to manoeuvre forest resource access and to benefit from the forest.

6.3.4 Working at night and at dawn

One of the personal observations I made during the fieldwork was that, most of the chainsaw operations occurs at dawn or in the night. Further interviews with the chainsaw operators revealed that these were periods that the forest guards had closed from work. And also these were periods when they can have access to the forest to undertake their activities without the forest guards on their trail. This is shown in the extracts from interviews with Ascona and Abu who are both chainsaw operators below

Ascona, a 39 year old chainsaw operator

I sometimes work early in the morning before 8am and late in the night too. This is when I can work without the forest guards on my trail.

Abu, a 54 year old chainsaw operator

We work in the night. It is very dangerous and a risky work since it is dark. But what option do we have, man must eat

Form the above extracts; it appears that the chainsaw operators use all means possible to access the forest. This is shown in their ability to benefit from the forest by working at dawn and in the night. The art of working at dawn or deep in the night further throws more light on their activities as banned and illegal. By working at dawn and night, chainsaw operators are able to access the forests and to benefit from its resources such as the trees which they log for their lumber. Working at dawn or in the night then becomes a tactic employed by the chainsaw operator to overcome access barriers and to benefit from the forests.

To sum up, local forest users invest in the social relations with the forestry officials to enhance and advance their interest. This interest is seen in their ability to access and benefit from the forests. Through the social relations, the chainsaw operators and the forest farmers

are able to bribe and negotiate their access and to benefit from the forests. The forest guards are also able to enhance and satisfy their defacto interest by receiving gifts and payments in the form of money from the local forest users. In instances where agreements between the forestry officials are not reached, forest user conflicts arise. The next section therefore presents the forest user conflicts that arise as a result of the interactions between the forestry officials and the local forest users. It further looks at how the conflicts are resolved.

Chapter 7

Forest user conflicts, conflicts resolution and the benefits from the forests

This section presents the forest user conflicts that arise and how they are resolved. It further presents the benefits that the local forest users and the forests guards gain from the forests as a result of their interactions.

In the study area, forest user conflicts occurred as a result of the interactions between the forestry commissions, represented by the forest guards on one side and the forest farmers and chainsaw operators on the other side. Conflicts also ensue as a result of the interaction between the forest farmers and the ‘illegal’ chainsaw operators. This is shown diagrammatically below

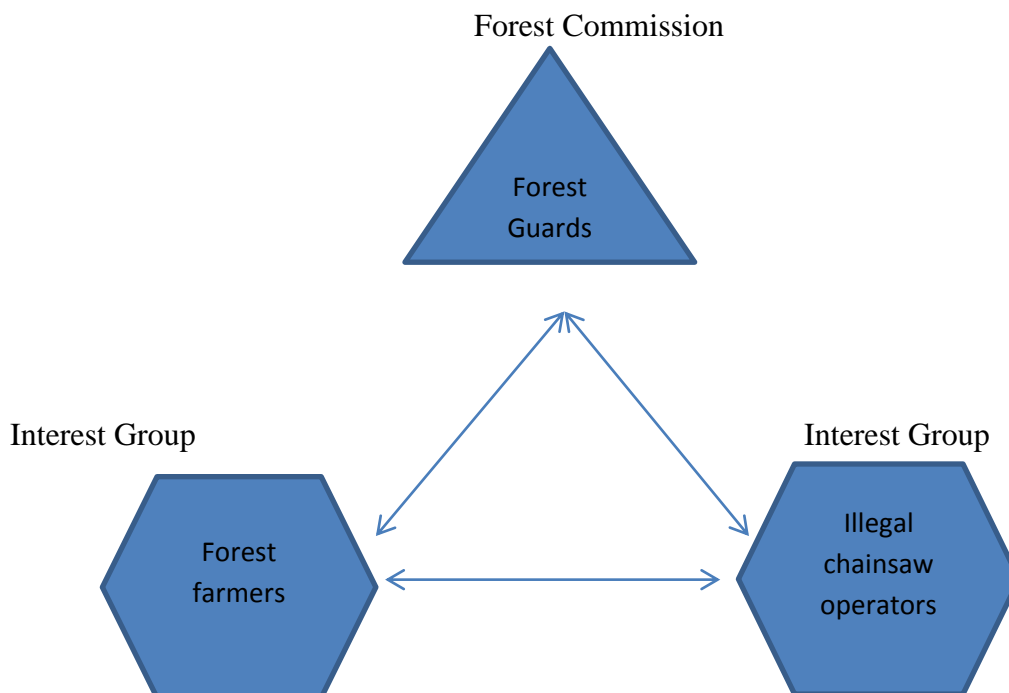


Figure 3: a diagram showing the interactions between actors involved in the forests which produces the user conflicts.

7.1 Conflict between forest farmers and forest guards

Forest user conflicts occur between the forest guards and forest farmers firstly due to the non-compliance of the mechanisms of access by the forest farmers. The forest farmers have to gain access through the forest guards. They are supposed to negotiate, pay money or present gifts to the forest guards to gain access to the forests. Failure to gain access through the forest guards leads to the user conflicts that arise.

I use the following cases to show the conflicts between forest farmers and the forest guards

Agyaku, forest farmer:

It was a Thursday morning. I went to my farm in the forest only to realise that the forest guards were destroying my plantain and cocoyam. The food crops they were destroying were the ones that were almost ready to harvest. I asked them why they were doing so and they said that I didn't see them before starting the farm. I got annoyed and you should have been there to see what happened (strange look on informant's face).

Kwesi, a forest farmer;

About a month ago, I was in my farm inside the forest when the forest guards came. They told me that it's illegal to farm in the forest and that they will destroy my crops. After a series of negotiations, I opted to give them money which they eventually agreed. I couldn't raise the stated amount of money on time, since I wasn't having. The following week when I went to the farm they had destroyed most of my crops

Buley a forest farmer who gained access on his own to farm in the forest:

If you don't pay them all the money they request, they will eventually destroy your crops. They came to me in the farm and asked me to pay 50cedis. I told them I only had 25 cedis which they accepted and told me to pay the rest within a week. I couldn't raise the money within the stated time period. I went to my farm only to realise that half of my farm have been destroyed. I contacted them and their response was that, since I had paid only half of the money they stated, they destroyed only half of my farm.

It can be seen from the above cases that , Agyaku, Kwesi and Buley did not see the forest guards before accessing the forests. They were further not able to meet the terms of negotiations that would have enabled them the continual access to their farms. Gaining access on ones own seems to be the starting point for the conflicts between the forest guards and the local forest users. It therefore appears from the above cases that non-compliance of the negotiated rule of access , which is the payment of money leads to the forests guards destroying the crops that are almost ready for harvest by the farmers. This appears to be one of the reasons why conflicts occur between the forest guards and the forest farmers.

7.2 Conflicts between forest guards and chainsaw operators

The forest guards have extra legal backing from the state. The forest guards are officially mandated by the state under the auspices of the forestry commission to protect and manage the forests. They therefore have the power to use force to stop any illegal activities they notice in the forests. Conflicts occur when the chainsaw operators are caught accessing the forests without the knowledge of the forests guards. I observed during the fieldwork that, both the forestry officials and the chainsaw operators use force through violence in a way. Force through violence is used by the forest guards when they pounce on chainsaw operators accessing the forests without their concern. The forest guards further engage the chainsaw operators when they are seen working inside the forest. They try to seize the chainsaws. Further interviews with the chainsaw operators shows that, they only resort to violence when persuasion and negotiations fail. The case below is from a chainsaw operator who have engaged a forest guard before:

On the 4th of July,2013, I was felling some lumber in the forest when the forest guards came around. You are under arrest, this was what they said. I then accepted and began to plead with them so that we can negotiate like we have been doing always. They agreed and asked me to pay 600 ghana cedis or they were going to seize my chainsaw machine. I began to negotiate and told them I could only raise 300 ghana cedis. Whiles negotiating one of the forest guards took my machine. I then tried to stop him,it became a struggle. I had no option than to cut his hand with my cutlass. I took my machine and run away because it is what I use to take care of my family.The most interesting part is that the machine is for my wife.What do I tell her when I get home.

It appears from the above that the forest guards with their knowledge of extra judicial backing employs force through violent means such as trying to seize the chainsaw machines. It also appears that the the chainsaw operators only resort to violence when persuasions and negotiations fail.

7.3 Conflicts between forest farmers and chainsaw operators

Interactions and negotiations between the forest farmers and the chainsaw operators sometimes leads to conflicts. During the fieldwork I observed that, there exist friendship ties and social relations between the forest farmers and the chainsaw operators. Further interviews with both parties shows that they require each others service. The chainsaw operators fell trees from the farms of the forest farmers. This prevents more shades from the trees, which enables the crops to produce high yields. The forest farmers on the other hand serves as a source of information for the chainsaw operators. This is seen in their ability to tell the chainsaw operators where they can get more lumber to harvest inside the forest especially on their farms. This social relations and friendships comes to a halt under certain circumstances. This occurs when the activities of the chainsaw operators destroys the farms and foodcrops of the forest farmers. The extract below from Ofri a 39 year old forest farmer shows how these conflicts are brewed:

The trees are not mine , the forest too isnt for me. But the food crops are mine. If you destroy my crops as an operator then we have to settle it. They (chainsaw operators) sometimes give you money or clears the branches of the trees from your destroyed crops so that they can sprout again.

The phrase *we have to settle it* presupposes that there have to be a way that both parties can resolve issues about the destroyed crops. It appears from further interviews with the forest farmers and the chainsaw operators that, these conflicts are mostly resolved by clearing the branches of the trees from the destroyed crops.

7.4 Resolving the conflicts that emerge

7.4.1 Forest guards and forest farmers

The forest guards are supposed to report any activity done in the forests to higher authorities within the forestry structure such as the district directors of the forestry division. However , from the fieldwork, it appears that the forest guards responds to the Odikro or Dademantse

instead of the district forest director. They report misunderstandings between themselves and the forest farmers to the Odikro and his elders. This suggests that, the forest guards has put in place their own forms of conflict resolution which is seen in arrangements with local chiefs to settle forest user conflicts. The Odikro or in his absence the Dademantse's resolve any conflicts between local forest users and the forest guards. The local chiefs are thus limited to resolving any conflicts that arise among the local forest users and the forestry officials. The odikro grants acces to lands he has bought and have control over ,but not the forests. This study found that the role of the local chiefs were more of conflict resolution between the forest guards and the local forest users.

7.4.2 Forest guards and chainsaw operators

Forest user conflicts between the forest guards and the chainsaw operators are resolved in two ways. Firstly conflict are resolved through payments of money. Chainsaw operators when caught in the forest, as at the time of the research, must pay an amount of 500- 600 ghana cedis. This amounts is subjected to reductions based on the culprits (chainsaw operator) negotiating abilities and social relations with the forests guards. The failure to pay such an amount leads the to seizure of culprits chainsaw machine. Chainsaw operators pay this amount to for peace to prevail. The head of the chainsaw operator groups role is vital during these payments and negotiations. He serves as a mediator and pleads on behalf of the culprit. When the payments and terms of negotiations are not fully resolved, this leads to the second mechanism of conflict resolution. That is, the issue is further taken to the Odikro. The Odikro tries to resolve the conflict between the forest guards and the chainsaw operators. It was observed through further interviews that, there were instances where the forest user conflicts between forest guards and the chainsaw operators were not resolved at all. This instances happened when the TOs , that is the supervisors of the forest guards were around for inspection. When such instances happen, the only option left for the culprit (chainsaw operator) is to face the permanent seizure of his machine or pay huge sums of money to persude the forest guards and their supervisors.

7.4.3 Chainsaw operators and forest farmers

Forest user conflicts between the chainsaw operators and the forests farmers are resolved through payments of money for the said destroyed crops. This payments sometimes never see the daylight. They never occur. The odikro and the dademantses further plays a role when

it comes to conflict resolution between forest farmers and the chainsaw operators. The conflicts are also resolved when the chainsaw operators or the said culprit, agree to clear the branches from the destroyed crops of the complainant. In the words of Teye Sika, a 46 year old forest farmer, “after everything we are brothers, so we sometimes allow them(chainsaw operators) to cut the branches from the crops. The destroyed crops will definitely sprout again”.

7.5 Forest access and its implications for rural livelihoods

The benefits that chainsaw operators get from the forests are trees to be sawn for lumber. The forest farmer gets access to lands in the forest to farm. The forest guards gain salary from the forestry commission, and in addition get foodstuffs and money from the local forest users. The ability of a local forest user to benefit from the forest depends on his or her endowments to go beyond the access barriers. Once access has been obtained, the benefits of the forest are then seen.

7.6.1 Forest farmers

To ascertain the amount that forest farmers gain from their farms inside the forests, I produced data on the incomes that they earned from their farms during the harvest seasons. A challenge here was the inaccuracy of the incomes gained by the forest farmers. I must admit they were estimates as the vagaries of memory and the lack of records for keeping income data, made it difficult for the informants to remember the exact amounts they made. The highest income recorded was 800 Ghana cedis. The lowest income recorded was 300 Ghana cedis

Kwame Tawiah, 45 year old forest farmer said this

Last year during the harvest I was able to get 350 cedis from the plantain sales. I managed to get 400 Ghana cedis from the sale of the cocoyam. You know cocoyam have more price than plantain now. This money is what I have been using to provide for myself and my family.

Akrasi a 50 year old forest farmer noted this

I had ‘eeem’... (Scratches his head) earned 200 Ghana cedis from the sale of plantain. I further made 450 Ghana cedis from the sale of the cocoyam. I use this money to support my wife and children. My family have to eat and my children have to get education. The forest is

good for now, because I am able to get food such as plantain and cocoyam for my consumption and also some for the market.

Bukari a 29 year old forest farmer noted that;

I was able to get 800 Ghana cedis from the sale of cocoyam. I was also able to get 350 from the sale of plantain. I use this money for paying my light bills and also for food. I also consumed some of the cocoyam and the plantain myself.

Akosua a 47 year old woman who is a forest farmer had this to say;

I plant tomatoes and okra in the forest. I was able to get around, 460 Ghana cedis through the sale the tomatoes. I also used some for cooking for myself and my family. In relation to the sale of the okra, I was able to get 120 Ghana cedis. We also used some for cooking home.

Derkyi a 47 year old who is a forest farmer said this

I was able to get 200 cedis through the sale of the pepper I produced. I used this money to support my husband so that we can take care of the family.

It's clear from the above cases that forest access through farming in the forest has implications on the livelihoods of the local forest farmers. It is worthy of notice here that, the forests farmers responded to the role forests play in their livelihoods individually and not by households. But the benefits from the forests were used by the entire household. The crops that are produced are used for subsistence and also for the market. The prices for the market generate income. These incomes are used to support forest farmers and their families. Farmers who were women used the income they had in supporting their husbands to take care of their children's welfare and education.

7.6.2 Chainsaw operators

Forest access by chainsaw operators also plays a role in their livelihoods. Even though their activities involve a series of cost, they are able to pocket huge sums of money.



Plate 4: A lorry being loaded with sawn lumber ready for the market

Buka, a chainsaw operator noted that

If only I am able to take the sawn lumber to the market I make between 5000 -10000 Ghana cedis. I use some of this money to pay the loading boy.

Caasy a 50 year old chainsaw operator noted

This is mostly my source of money. I sell the sawn lumber and the money I get from the sale is used by me, my wife and my three daughters. I have been doing this for about 4 years now. This is how I survive. I make quiet an amount of money from this job. There are certain times when the sawn lumber is arrested on its way to the market. If this happens, then we are in trouble. You have to pay for the car and the sawn lumber. I paid 800 Ghana cedis for the car carrying sawn lumber when it was arrested by the police. There was no way I could get the lumber back. This was because, the police asked me to pay 2500 Ghana cedis. I can't pay that amount of money so I let them have it all. This really affected me badly.

The above extracts show how forest resource access plays a role in the livelihood of the chainsaw operators.

7.6.3 The forest guards

Payments in the form of money and gifts such as foodcrops are received by the forest guards from both the chainsaw operators and the forest farmers. The forest farmer's form groups contribute money and give it to the forest guards. A group of farmers I interviewed together said that they paid 300 cedis to the forest guards before they had access to the forests. A chainsaw operator before getting access pays between 200-300 Ghana cedis to the forest guards. The forest guards also benefit from the local forest users especially when they arrest them in the forest illegally or without their concern. When chainsaw operators are arrested, they pay between 500-600 Ghana cedis for the release of their chainsaws. This suggests the informal mechanisms of forest resource access have placed the forest guards at a position where they are benefitting from the forests. The forest guards share this income and benefits with their supervisors (Technical Officers). This then enable the forest guards to continue their dealings with the local forest users. The presentation of gifts and money by local forest users to forest guards which they in turn share with their superiors has become a process. This on-going process enables all the actors involved that is, the farmers, chainsaw operators and the forestry officials to benefit from the forests.

7.6.4 Head porters and loading boys

Head porters work together with the chainsaw operators during their activities in the forests. They carry the sawn lumber by head to a safer place out of sight and also for safer transportation. Through interviews with the head porters, the highest they made in terms of money was 200 Ghana cedis depending on the number of sawn lumber they can carry to safety. They use this for feeding. The loading boys are responsible for loading the tracks with the sawn lumber. It appears that most of the head porters were the same people performing the role as loading boys. They make money form loading these vehicles. During interviews with them, they noted that the activity gives them the financial capacity to feed themselves and their families.

7.6.5 The forest community

The forest community has erected a barrier. Behind this barriers are members appointed by the Unit Committee Chairman⁸. These people take money from the chainsaw operators when transporting their sawn lumber to the market. They collect 20 Ghana cedis before the cars loaded with the lumber can pass. These money upon informal conversation with the chairman of the unit committee, are used for the maintenance of the drilled boreholes anytime they breakdown in the community.

In the next section the findings of this work are discussed in light of the theories used

⁸ The unit committee consists of not more than 15 persons made up of 10 elected persons ordinarily resident in the local community. They are resident people in the community who serve as effective liaison officers between the government and the local community.

Chapter 8

Discussions of Findings

In this chapter I discuss the findings of the study in relation to the theories used for this study. I discuss the interests, politics, power and the forest user conflicts that arise within the Political Ecology Approach. I further discuss the benefits and the mechanisms that local forest users activate to maneuver forest resource access using the Access Theory. Lastly the mediating role of institutions in maneuvering and benefitting from the forest resources will be discussed within the Environmental Entitlements Approach

8.0 The political Ecology Approach

8.1. Assessing and controlling forests as a reflection divers social actors interests

Forest actors considered for this study are officials from the Forestry Commission represented by the forest guards, and the local forest users notably, the forest farmers and chainsaw operators. The actor oriented approach of Political Ecology considers the interests and strategies of actors that enable them to access and control forest resources.

8.1.1 The forest Commission (FC) represented by the forest guards at Bepposso

The FC is officially mandated to protect the forests in Bepposso. Interviews with farmers, chainsaw operators and the Odikro indicated that the major interest of the forest guards is the economic benefits accruing from the exploitation of forest resources by the local forest users. The forest guards to achieve to this interest employ the following tactics, strategies and actions. Firstly, the forest guards grant access instead of monitoring and protecting the forest. By granting access to the local forest users, the forest guards are able to satisfy their economic interests through the gifts and money they receive from the local forest users.

Also, the unwillingness of the forest guards to report illegal activities done in the forest by local forest user to their superiors is another strategy that the forest guards adopt to satisfy their interest. They implement their own procedures, whenever local forest users are caught assessing the forests illegally. It appears that they resort to negotiations with local forest users. Through the negotiations, the forest guards are able to pocket relatively huge sums of

money. Hence negotiating, and unwillingness to report to the appropriate authority reflects how the economic interests of the forest guards are met.

Further, this study found that to enhance their economic interests, the forest guards resort to resolving conflicts at the local level. During interviews with the forest guards, none of them said that they have ever taken any local forest user to court or reported them to the appropriate authority. The forest guards reporting to higher authority will imply a Lose-Lose Situation for themselves and the local forest users. That is the local forest users will lose out on access to the forests and the forest guards will also not gain in the form of the gifts and money they receive from the local forest users. What they do is to resort to resolving the forest user conflicts that arise. By resolving the conflicts, the forest guards are able to collect money from the local forest users as a compensation for using the forests.

Lastly to enhance their economic interests, the forest guards protect the ‘illegal’ farms of the forest farmers whom they have granted access to. They do this by taking their supervisors to areas that have much forest cover and not to the areas with the farms in the forests.

The forest guards to be able to satisfy their defacto economic interests and at the same time act in a way to indicate their commitment to their de jure mandate, adopts multiple strategies which include the following. Firstly, the forests guards destroy the farms and food crops of the farmers who gained access to forests on their own. Also, the forests guards arrest and seize the sawn lumber by chainsaw operators who gained access on their own. Lastly, the forest guards adopt the “public transcript” to blame forest loss on farming and chainsaw operating activities. In the words of Konan a forest guard “farming inside the forest and chainsaw operating activities are leading to forest loss in Bepposso”. Activating such transcripts has enabled the forest guards to appear to the community as concerned people taking care of the forests. These strategies adopted by the forest guards to satisfy their de jure mandate reiterates with the postulations of Peets and Watts (1996) and Escobar(1996) that powerful actors control the public transcript to legitimize the dominance of their interests over weaker actors.

8.1.2 The chainsaw operators

The chainsaw operators have been banned legally from the assessing the forests except through permits (see chapter 5). The major interest of the chainsaw operators is to gain access to trees in the forests to sawn for lumber. Gaining income from this activity also reflects the

interest of the chainsaw operators. To satisfy their interest in relation to forests access and control, they adopt two strategies. Firstly, they gain access on their own and secondly through what I labeled 'the cash and carry system'. The ability of chainsaw operators to gain access and to benefit from the forests on their own suggests two things. Firstly, inefficiencies in the monitoring and management of the forests exist especially at the local level. This further suggests that regulations do not always achieve their intended outcomes. Secondly, these inefficiencies in the governing the forests, creates opportunities and favorable conditions for chainsaw operators to satisfy and to defend their interests in relation to the forests resources. Chainsaw operators gaining access on their own is what leads to the forest user conflicts that arise. The 'cash and carry system' used to access the forests shows the mechanisms, strategies and the politics that surrounds gaining access to forests resources in Bepposso. The modus operandi of the 'cash and carry system' operates on the notion that the chainsaw operators pay an amount of money which is mostly negotiable to gain access to the forests. Amounts of money paid by chainsaw operators to gain access were set between (100- 300 Ghana Cedis per access depending on the actors negotiating abilities). The payments of this amounts of money enables both the forests guards and the chainsaw operators to satisfy their interests and to thread new pathways without forest user conflicts arising. The inability of chainsaw operators to pay such moneys to gain access to benefit from the forests reiterates with the postulations of Leach et al., (1999) that certain social actors may not be able to mobilize some endowments (example capital) that are necessary in order to make effective use of others (example the forests). Further the ability of chainsaw operators to operate within the cash and carry system to gain access and to benefit from the forests suggests that everything revolves around the forest guards.

8.1.3 The forest farmers

The forest farmers' major interest is manifested in their quest to gain more lands in the forests to undertake farming activities. The incomes and foodstuffs they produce further reflect their interest. During interviews with the local chiefs, they noted that the farmers wanted the forestry officials to allow them to manage the forests on their own. This view was fiercely contested by the forest farmers during the group interviews. The forest farmers noted that, what they needed is greater and flexible access to lands in the forest to farm. To satisfy this interest, the forest farmers adopt the following actions and strategies. Firstly, they rely on their endowments such as money to convince and enlist forest guards into association to

enable them benefit from the forests. Secondly, another strategy adapted to satisfy their interests is by forming groups. The groups consist mostly of people between five to ten members. The group members contribute money between 20-150 Ghana cedis. These contributions are then given to the forests guards. The forest guards then gives each member of the group an acre of land to farm. Another strategy adopted by the forest farmers to satisfy their interests is by assuring the forest guards that they will plant trees together with their food crops whenever access is granted to them. Through these assurances, they are able to manoeuvre access to lands to undertake farming activities. The assurances by the forest farmers to the forest guards to plant trees are motivated by the Tuangya System⁹. The system was introduced to restore Ghana's forest cover, solve the land shortage problems for farmers living near forest reserves, and provide the Forestry Department with labour for plantation development. Through further interviews with the forest farmers it became clear that even though local farmers planted the trees, they later on destroyed most of them. The reason being that, the trees shade their crops from receiving much sunlight needed for higher yields. This presupposes that the Tuangya system is been used by the forest farmers as a motivation to defend and to satisfy their interests.

8.2 Power as pervading actor interactions

The field of political ecology lays much emphasis on how power relations circumscribe actor interaction in relations to resource access and control. I discuss the fluidity of power and the power forms that the various forest guards and the local forest users possess that enables them to defend and enhance their interests in relation to the forests.

The forests actors discussed above are characterised by unequal power relations with regards to forest resource access and control. The Forestry Commission (FC) determines the use and access right of forest resources in Bepposso. The FC is represented in Bepposso by the forest guards. The FC, represented by the forest guards can be seen as the most powerful actors in this sense. The forest guards are recognised by all the informants as the most powerful actor in relation to forest access and control at the local area. The power of the forest guards resides in the fact that, they represent the FC which by the virtue of the public transcript possesses the legitimate right to manage and protect the forests in Ghana. The use of the public transcript by the forests guards ensures that they position their strategies to control the access

⁹ The Taungya is a system of forest plantation in which small-scale farmers are allowed to cultivate crops between the seedlings of a forest plantation for the first few years after planting (Amanor, 1996)

of forest resources by local forest users. The control and use of the public transcript (forest policies) presupposes that the forest guards possess the power forms *authority*, *coercion* and *force* over the access and use of the forests in Bepposso.

The power form authority possessed by the forest guards involves situations where the subjects (local forest users) comply because of the conviction that the power holder (forest guards) has the ability to command (see Scott, 1994). The chainsaw operators and the forests farmers comply with the laid down agreements between themselves and the forests guards. The chainsaw operators and the forests farmers play according to the cash and carry system and they also negotiate their access through the agreed upon mechanisms of access respectively. The local forest users comply in order to satisfy their interests being aware that the forest guards can make or unmake them by granting them access or otherwise.

The use of the public transcript which mandates the forest guards to enforce and monitor the forests indirectly denotes the power form *force* to the forest guards. The forest guard's possess and use the power form *force*, whereby they are able to impose obstacles to restrict the local forest users freedom and to inflict pain or discomfort in their activities. Negative sanctions used by forest guards include the seizure of chainsaws and sawn lumbars and the destruction of farms. The use of these negative sanctions makes the forest farmers and the chainsaw operators comply to the interests of the forests guards.

Lastly, the use and control of the public transcript has enabled the forests guards to resort to the use of the power form *coercion* to satisfy their interests and to thread new pathways with the chainsaw operators and the forests farmers. *Coercion* occurs when the forest guards acquiesce the local forest users willingly under threats of forcible sanctions (see Fairholm, 2009) to make the chainsaw operators and the forests farmers to comply. The use of threats by the forests guards makes the local forest users enter into negotiations with the former. By so doing the forest guards are able to naturalise their dominance, strategies and interests in relation to the forest resources. The forest guards seen in this sense as the most powerful actors, are not always dominant in relation to the access and control to the forest resources. This is because power is fluid and circumscribes actor interactions. This suggests that even weaker actors possess some form of power which they activate to defend their interests.

For the sake of this study I see the forest farmers and the chainsaw operators as the weaker actors. This is due to the fact that they need permit to access and to benefit from the forests

from the FC which is represented by the Forests Guards at the local level. The local forest users employ subtle forms of power to manoeuvre forest resource access and to benefit from the forest. Power forms employed by local forest users to manoeuvre forest resource access include *inducement*, *persuasion* and *manipulation*.

The power form *inducement* comes to the fore when the subjects (forest guards) compliance is based on a reward from the local forest users (See DesCrispely, 1968). The chainsaw operators and the forests farmers are fully aware of the forest guards and the power they possess over the forests. They therefore employ *inducements* which are based on the payment of money to reward the forest guards for the access granted them. The giving of money as a form of reward to the forests guards enables the local forest users to gain access and to benefit from the forests. The forest farmers for instance forms groups and make contributions in the form of money, which they give to the forest guards as a reward to gain access. The chainsaw operators mostly engage the forest guards individually. They contact the forest guards and pay money to them. Through the payment of money, the forest guards comply by granting access to the chainsaw operators which they are not allowed by law to do. The power form *inducement* is therefore a subtle power employed by the weaker actors (chainsaw operators and forest farmers) to enhance and continue to defend their interest in relation to forest resource access in order to benefit from the forests.

Another power form possessed and activated by the chainsaw operators and the forest farmers to defend their interest and to manoeuvre forest resource is *manipulation*. Social relations, ethnic, religious and family ties serves as opportunities, which provides conditions favourable for the successful exercise of the power form *manipulation* by the forest farmers and the chainsaw operators. In the words of Atoke a forest guard “it becomes very difficult, tough and tricky for me when local forest users use phrases such as ‘my brother’, ‘my church member’, ‘my tribesman’. Such words makes it very difficult for me to not to help them”. This presupposes that, through the use of such phrases or words, the chainsaw operators and forest farmers are able to inexplicitly influence and manipulate the forest guards to benefit from the forests.

The last power form which is very subtle that is activated by the local forest users to manoeuvre access and to benefit from the forest is *persuasion*. The power form *persuasion* is activated when the chainsaw operators and the forest farmers presents rational arguments that are appealing to the forest guards. Firstly persuasion is seen in the desire of the local forest

users offering help voluntarily to the forestry officials. This is manifested in their quest to help the forest guards locate the ‘beats’ or boundaries and to make these boundaries visible by clearing the weeds between. Through the clearing of the beats or boundaries, the forest farmers for instance are able to present rational arguments and to make bigger request about gaining access to land in the forest to farm. In this sense, the use of persuasion as a subtle form of power reflects the *Foot-in-the-door* (FITD) technique which is a compliance tactic. The FITD involves the local forests users getting the forest guards to agree to a large request, which is granting them access, by first setting the forest guards up by having them agree to a modest request which is helping them clear the beats or boundaries. Secondly persuasion is also possessed and activated by the local forest users when forest user conflicts arise. Chainsaw operators and forest farmers when caught using the forest without the concern of the forest guards resort to persuasion. They present rational arguments and plead with the forests guards who then agree on settling the conflicts whatsoever at the local level without taking up to their superiors. Chainsaw operators and forest farmers are able to persuade the forest guards to resolve the conflicts through the Odikro and the dademantse. Persuasion as a power form possessed and activated by the local forest users enables them resolve conflicts and to continue the realisation of their interests with regards to the forest resources.

The possession and use of the power forms persuasion, manipulation and inducements by the chainsaw operators and forest farmers enable them advance their tactics and strategies to benefit from the forests through the forest guards. This reiterates the postulations of Bailey and Bryant (1997) that powerful actors are not always dominant in the control and access to resources. It further reiterates the postulations of Hussien and Ketz (1991), about how *abilities* and *opportunities* are vital to examining power potential. That is the *ability* of local forest users to invest in social relations with the forest guards by relying on their endowments (gifts, money) has provided *opportunities* and favourable conditions for the successful exercise of power. In this sense, power has become a matter of winning the battle of ideas over the use of forest resources in Bepposso. This is due to the fact that, the forestry officials, the chainsaw operators and the forest farmers are all seeking to legitimise the triumph of their interest over each other (in relation to the forest) , by relying on the forms of power they possess.

The power form *force* was not a reservoir of only the forest guards who are seen in this study as the most powerful actors. Through interviews and participant observation, this study found

that *force* as a power form where compliance is achieved through the use of negative sanctions was used by the weaker actors (chainsaw operators and the forest farmers) when all other alternatives were exhausted. Negative sanctions employed by local forest users include reigning curses and causing physical harm to the forest guards. The possession of negative sanctions by both the forest guards and the local forest users has therefore created an environment whereby force operates quite effectively without ever being used.

8.3 Actor Interaction and outcome

The political ecology approach further lays emphasis on the outcomes as a result of the interactions between the diverse social actors (Bryant and Bailey, 1997). This study found that, actor interactions between the forestry officials and the local forest users results in two outcomes; these are forest resource access and the forest user conflicts that emerge. I discuss the forest user conflicts that occur with the political ecology approach and discuss forest resource access in relation to the access theory.

This study found that the advent and continuance of forest resource policies has set the stage for the mechanisms of access. Further the emergence of the forest policies has led to the switch of access and user rights from the chiefs and local people and now resides with the central government represented by the FC. This presupposes that gaining access without a permit from the FC is considered to be illegal. The bureaucratic and costly nature of gaining access through the permit system by the FC has created a stage for the forest guards and local forest users to interact. This study found that manoeuvring, gaining access and benefitting from the forests is mostly secured through the forests guards, who based on the public transcript are mandated to monitor and protect the forests. The user conflicts occurs when the local forest users don't play according to the agreed upon rules between themselves and the forest guards. The refusal of local forest users to play according to the agreed upon rules of engagement suggest two things. Firstly, local forest users possess some form of power to defend and enhance their interests. Secondly local forest users gaining access on their own suggests that the forest guards cannot satisfy both their de jure and defacto interests in relation to the forests. The forest guard's de jure interest is not met because, they are not able to monitor and protect the forest as mandated to them by the state. The defacto interests of the forest guards is also not met due to the fact that, they cannot benefit in the form of money and gifts from the activities of the local forest users. The inability of the forest guards to meet both their de jure and defacto interests makes them deploy the power form *force* to impose

obstacles and to restrict the freedom and inflict discomfort on the forest farmers and the chainsaw operators. This resonates with the postulations of actor oriented approach of political ecology by Bailey and Bryant(1997) that the differences in the interest, characteristics and actions of different types of actors is very vital in understanding political-ecological conflicts.

The Political Ecology has been used to discuss the interests, motivations and the power relations between the actors which enable them to defend and enhance their interests in relation to the forests. In the next section, the Access theory is used to complement the Political Ecology approach to discuss the benefits that the diverse actors get from the forests and the manoeuvring tactics they activate in doing so.

8.4 Access Theory and the Manoeuvring tactics

The Access theory retains that, the benefits that actors gain from the forests must be identified first. This study sought to find out *the implications of forest resources access on rural livelihoods*. This study found that, the forest guards gain economically in terms of money and gifts such as foodstuffs from the local forest user's access to the forests. Also, the chainsaw operators benefit from the forests in the form of income from the trees they sawn for lumber. The forest farmers benefit by gaining access to land to undertake farming activities. The forest community, Bepposso, also benefit from the money they take from the chainsaw operators before they transport their sawn lumber to the market.

Further the Access Theory (Ribot and Peluso, 2003) identifies the mechanisms by which the different actors involved gain, control and maintain their benefit flow. The access theory to achieve this, distinguished between two sets of mechanisms which access is gained, maintained and controlled. The first is *right based access* which refers to access sanctioned by law. The second is '*structural and relational mechanisms of access*', which includes access to authority, social identity and access via the negotiations of other social relations. This study further sought to find out the *mechanisms that local forest users activate to manoeuvre forest resource access*. It was found that, chainsaw operators and forest farmers invested in the structural and relational mechanisms of access and not in the right based access. This is because the right based access involved gaining a permit from the FC. The bureaucratic and costly nature of obtaining a permit deters the local forest users from undertaking such a venture. The local forest users rather form and invest in social relations

with the forestry officials to manoeuvre forest resource access. By relying on these social relations, the chainsaw operators and the forest farmers are able to manipulate, negotiate and bribe forest guards to achieve their interests by gaining access to the forests. Further, both vertical and horizontal social relationships existed and that it played a vital role in the ability of both the local forest users and the forestry officials to enhance their interest in relation to the forests.

Horizontal social relationships exist between forest guards and the local forest users. This is seen in their ethnic and religious relations. This horizontal social relation appears to serve as a platform where gifts and payments are received by forest guards which enable local forest user's to manoeuvre forest resource access. Vertical relationships also exist between the forest guards and the Technical Officers (TOs). The vertical relation of the forest guards and the TOs is seen in the latter's supervisory role over the former. The forest guards share the money they receive vertically with their superiors. This enables the forest guards to continue their interactions and activities horizontally with the local forest users.

Further the Theory of Access retains that some people and institutions control resource access while others must gain and maintain their access through those who have control (Ribot and Peluso, 2003). In Bepposso, the FC which controls access and use rights to the forests is represented by the forest guards as monitors and protectors over the forests. The local forest users, due to the bureaucratic and costly nature of obtaining a permit from the FC, have put in place negotiated rules and agreements between themselves and the forest guards. By so doing, the chainsaw operators and the forests farmers are able to gain and to maintain their access to the forests through the forests guards. In this sense, the forest guards control the access to the forests at Bepposso and the local forest users to avoid conflicts and at the same time to satisfy their interests, gain and maintain their access through the former.

The Access Theory has been used to discuss the mechanisms of gaining access, the manoeuvring tactics and the agreements between the local forest users and the forestry officials. In the next section, and following Leach et al., (1999) definition of institutions, I used the Entitlements Approach to discuss, analyse and categorize the manoeuvring tactics and arrangements between the forestry officials and the local forests users as institutions. And further to discuss the mediating role of institutions in manoeuvring forest resource access.

8.5 The Environmental Entitlements Approach and the mediating roles of institutions

I discuss at the institutions that enable both the forestry officials and the local forest users to benefit from the forests. In Ghana, and in the study area, the only legal means that one can benefit from the forest is through permits from the Forestry Commission (see chapter 6). This authority is represented here by the forests guards and their supervisors known as Technical Officers (TOs) in the study area. From the state or an outsiders perspective, the forests guards and their activities appears to be formal. Hence they can be seen as a formal institution that is part of the Forestry Commission. From an insider's perspective or to 'see through the eyes' of the informants, the arrangements between the forests guards and the local forest users which enables the former to grant access to the latter may be seen as an informal form of institution. Informal in the sense that, these arrangements which include negotiations, the cash and carry system, and issues of reciprocity have been endogenously enforced; and are being upheld by mutual agreement among the forest guards and the local forest users. The forest guards draw on their activities as backed by the state, to act as the real actors that grant access to the local forest users in Bepposso. This suggest that, the formal institution which forest guards are part of, and the existence of informal institution in the form of arrangements between the forest guards and the local forest users, makes the forest guards, the real actors that determines what happens inside the forest. This further means that the forest guards manoeuvre within both the formal and informal institutions.

Further at a more progressively local level, another institution that emerges is the role of the Odikro and his elders in forest user conflict resolutions. The presence and the ability of the Odikro and His Elders to resolve the forest user conflicts, provides an opportunity and further serves as a springboard for the forestry officials and the local forest users alike, to thread new pathways. This new pathways are seen in the forest guards ability to enhance their economic interests through the forest conflict resolutions. The reason being that, during the conflict resolutions, the culprits (local forest users) pay money as a compensation for using the forest to the forests guards. This new pathway is further reflected in the ability of the local forest users to gain forest resource access to satisfy their interests. The local forest users invest much in the informal institutions to manoeuvre forest resource access. This is partly as a result of the bureaucratic and costly nature of gaining aces through the permit system from the FC. This presupposes that in this study, the role of informal institutions in mediating forest resource access appears to carry more weight than the formal institutions. This means

that, the manoeuvring of forest resource access by the local forest users is best secured through the participation in negotiations and the agreements between themselves and the forestry officials rather than through the 'permit' system from the FC.

To sum up and drawing on three theoretical frameworks, this chapter has discussed how local forest user maneuver forest resource access and the role it plays in their livelihoods. Using the Political Ecology approach, we realized how diverse social actors have interests in the forests. We saw how the fluidity of power enables all the actors to defend and enhance their interests in relation to the forests. By drawing on the Access Theory, we saw the benefits that actors gain from the forests. We further saw how the various actors rely on social relations to gain, and maintain their access to the forests. Lastly by drawing on the Entitlements Approach, we saw how institutions were vital in mediating forest resource access and control. We saw that the informal institutions carried weight more than the formal institutions in relation to the maneuvering of forest resource access. That is the actors invested much in the informal institutions to satisfy their interests.

It is worthy of notice here that, the guards have multiple interests in the forests. The local forest users therefore rely on these multiple interests of the forests guards and form social relations with them. By investing in these social relations, the local forest users are able to manoeuver forest resource access through negotiations and payments of gifts. The next section discusses the summary of the findings and the conclusions made from the study.

Chapter 9:

Summary of findings and conclusions

This chapter discusses the summary of the findings of this study; this is then followed up by the conclusions drawn out from the work with some recommendations. The study aimed at exploring the mechanisms and maneuvers of forest resource access and its importance in rural livelihoods. Using the Political Ecology Approach, the study explored the politics, interests, motivations and the unequal power relations that surround forest resource access and control. The Access theory was used to explore the benefits that the actors involved gain from the forests and the maneuvering tactics they activate to expend such benefits from the forests. Lastly the Entitlements Approach was used to explore the mediating role of institutions in forest resource access and control.

9.1 Summary of findings

9.1.1 Who grants access, who gains, who loses out and what forest user conflicts arise

The interest of the British colonial government and the successive Ghanaian governments after independence in forests and its resources thereof has led to the reservation of some native lands as forest reserves. Forest policies were also enacted to ensure the sustainable management of these reserves in Ghana. The forest policies have created a system where the forests are not open access resources. That is access to and benefit from the forests must be secured through a permit from the FC. The access and use rights to the forests reside solely with the FC. The FC as part of its activities has stationed forest guards at forest communities to ensure the better protection and management of the forests. To unravel the motivations, interests and the powers that the chainsaw operators and farmers possess that enables them to put up tactics to access the forests; I drew upon the actor oriented approach of Political Ecology. Findings from the study show that the forest guards are the real actors that determines who gains access and who loses out. The study showed that the forest guards and the local forest users have interests in the forests. The study further found that, the forestry officials and the local forest users are characterized by unequal power relations. Further the findings show that all the actors possess some form of power which they activate to protect

and advance their interest. The forest user conflicts occur when the local forest users did not play according the agreements and negotiations between themselves and the forest guards.

9.1.2 Mechanisms of access and the benefits from the forests

To address the research questions on the benefits that the actors gain from the forests and the mechanisms they activate in doing so, I drew upon the Access Theory. Findings from the study show that the benefits that the forest guards gain were payments and gifts (foodstuffs, money) from the local forest users. The chainsaw operators benefit by gaining access to trees in the forests which they saw for lumber. The forest farmers benefit by gaining access to lands which they use to undertake farming activities. The forest farmers and chainsaw operators to benefit from the forests, enter into social relations with the forest guards. By investing these social relations, the local forest users are able to present gifts and payments in other to negotiate and bribe forest guards to manoeuver forest resource access.

9.1.3 Mediating role of institutions

The Entitlements Approach was used to explore the mediating role of institutions in manoeuvring forest resource access. Formal institutions may be thought of as “rules that require exogenous enforcement by a third party organization” (Leach et al, 1999). Findings from this study show that the forest guards and their activities as supported by the FC and the state can be seen as a formal institution. Further Leach et al., (1999) defined informal institutions, as arrangements that “may be endogenously enforced; and which are upheld by mutual agreement among the social actors involved” (Leach et al, 1999). The arrangements, agreements and negotiations between and among the forest guards and the local forest users that enables them to benefit from the forests, may be seen as informal institutions. This study found that the informal institutions carried more weight than the formal ones. That is manoeuvring forest resource access was best secured through negotiations, agreements and payments between the local forest users and the forest guards rather than the permit system by the FC.

9.2 Conclusions

This study has emphasized how through social relations, diverse actors with multiple interest, characterized by unequal power relations manoeuver forest resource access and control. The study relied on participant observation, document analysis and interviews with forestry

officials, government officials, local chiefs, forest farmers and chainsaw operators who were purposively selected and their views and appraisals solicited.

Social relations are very vital and pivotal to communal living in Ghana. This thesis has argued for human agency in manoeuvring forest resource access through social relations. That is the ability and capacity of the local forest users to act independently and to make their own free choices in influencing forestry officials to manoeuvre forest resource access was apparent in this study. This decision by local forest users to manoeuvre forest access and to benefit from the forests was goal oriented and purposeful. The agency of the local forest users was influenced, encouraged and motivated by the plurality of interests of the forests guards and the ability to enlist the forests guards into their associations. Even though structures such as forest resource governance policies have been put in place by the FC to check the activities of the local forests users, they have been able to employ manoeuvring tactics to manipulate the structures of the FC to defend and advance their interests. It seems to appear that the mechanisms and the manoeuvring tactics employed by the local forest users have become a norm which have been conventionalized and codified as a way of benefitting from the forests without a 'permit' between themselves and the forest guards. In this sense, the local forest users to avoid user conflicts and to benefit from the forests consult the forests guards. The chainsaw operators through the 'cash and carry system' are able to access the forests and to benefit from it. The forest farmers contribute money and present it to the forest guards as a way of accessing and benefitting from the forests. Forest user conflicts are then avoided when the access of the local forest users are sanctioned and mediated by the forests guards. The local forest users then are able to overcome access barriers and resistances from the FC and to access and benefit from the forests which are under protection. However, the barriers (forest governance policies) mean that forests are not open access, and serve to provide some degree of conservation of forests.

The study found that the local forest users have interest in the forests. The forests play an important role in their livelihoods. Considering the local forest users categorization of the forests as a source of resources to be accessed, their involvement and participation in forest management seems to be in the right direction. This is not to say that local level participation of local forest users is a panacea for sustainable forest governance or management. A proper monitoring scheme to monitor local forest user's activities is not out of place. For instance local forest farmers can be given 'degraded' lands to farm whiles planting trees concurrently.

This will ensure that they have a place to farm where they could get income from their produce to enhance their livelihoods. The long term effect of this will be the regeneration of the forests.

The study further found that, the forest policies has made the forest guards the main actors that determine what goes on inside the forests. Further and in relation to the adage that ‘most empires begin to fall from within’, the equipment of the forest guards is a matter of priority if not urgency. The forest guards appear to be the implementers of the forest policies in the forest communities. Their equipment in the form better remuneration of service will to an extent minimize if not prevent the informal mechanisms of access outside the permit system. This will further go a long way to preventing the forest user conflicts that occurs between local forest users and the local forest users which mostly results in injuries and sometimes deaths. For instance, ‘the Chief Executive of the FC, Mr. Samuel Afari on 29th May, 2014 during the third forestry commemoration week in Kumasi noted the death of over sixty nine gallant forest guards and wildlife rangers from 2011 to 2014’ (Modernghana, 2015).

The study has contributed to the knowledge on the politics, interest, motivations, strategies and power relation that surrounds forest resource access and control. The study concludes that local level participation of the local forest users in forest resource governance and the strengthening of the FC structures and monitoring schemes appears to be way forward in the right direction. The long term effect of this will be the achievement of sustainable forest management for the benefit of the nation as a whole.

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APPENDICES

Appendix 1: Questionnaire for forest farmers

Forest Resource Access and its implications on rural Livelihoods

The questionnaire is aimed at collecting data for the partial fulfilment in the requirement of the award of master of philosophy in Development Geography at the University of Bergen. Please any information provided will be kept confidential and for academic purposes only.

Place of study

Name.....

Type of livelihood activity.....

Date.....

Taped.....extra notes.....

1. Ethnic Identity.....

2. Where were you born?
.....

3. When did you move to this place and why?
.....
.....
.....

2. Religion.....

3. Age.....

4. What education have you completed.....

5. What Livelihood activities do you do?

.1.....2.....
.....3.....4.....
other.....

6. When did you start doing this work? Year..... 1 year.....1-5 years, 5-10 years.....other.....

7. How did you get the idea to do it?
.....
.....

8. How did you get capital to start this work? Personal savings....loan/credit....micro credit.... Parents/siblings.....other

9. What other work were you doing before you started this one?

10. How long have you been staying here? Since I was born.....0-1year...1-5years...5-11.years.....10years+.....other.....

12. Do you farm in the forest? Yes....No...

What is the market and subsistence value of each of the crops cultivated?

Type of crop	Weekly income value	Monthly income value	Peak season income value	Lean season income value

13. Do you get always get access to the forest and why?
.....

14. How do you gain access to the land in the forest to farm?
.....

15. Which level of officer grants you the access to the lands in the forests to farm?

16. How do you maintain your access to the forest lands for farming?
.....

17. What happens if you fail to get access to the forests to farm?

18. What do you do?

19. Do you face competition from other members to get access to the forests? Yes.... No....who is those groups or members?

20. What conflicts or misunderstandings occur between you and other forest users such as chainsaw operators?
21. How do these conflicts affect your access to the forests? Yes...NO..... How?
22. Do these conflicts affect the income you get from your farms in the forest?
Yes....No.....how?.....
.....
23. Have you ever receive any compensation from the chainsaw operators? Yes.....no... how much?
24. Apart from farming what other benefit does your access to the forest bring to you? 1, Firewood....2, wildfriuts.....3, medicinal plants.....other.....
25. How many people do you work with (employees)....1, wife....2, children.....3, relatives.....other
26. What is their share of profit or salary?
27. Are you a member of any association? Yes..... No..... ? 1, Farmer groups....2, savings..... club.....other.....
28. Does your membership of the association help you to get access to the forests? Yes....no.....how?
29. Where do you sell your produce from the farm? Village.....nearby town.....other.....
30. Do you have available market for your produce? Yes...No.....
31. Does the availability of markets for your produce enhance your access to the forests to farm?
Yes...No.....how?.....
.....
32. Do you experience harassment/conflicts from forestry officials?
Yes.....
No.....How?.....
.....
.....
34. Do you know any forestry official? Yes.....No.....
35. Does your relation with the forest officials enhance your access to the forests? Yes.....No.....How?

.....
.....
.....
.....

36. What is your view on getting access to the forest?

.....
.....

37. Other comments or questions.....

.....
.....

Appendix Two

Questionnaire survey for chainsaw operators

Forest Resource Access and its importance on rural Livelihoods

The questionnaire is aimed at collecting data for the partial fulfilment in the requirement of the award of master of philosophy in Development Geography at the University of Bergen. Please any information provided will be kept confidential and for academic purposes only

Survey/ interview guide place no.....

Activity.....
.....

Taped..... extra notes.....

1. Ethnic Identity.....
2. Religion.....
3. What education have you completed.....
4. What is your occupation.....
5. When did you start doing this work? Year..... 1 year.....1-5 years, 5-10 years.....
6. How did you get the idea to do it?
7. Did you need any skills to do start it? Yes..... NO.....From whom.....
.....
8. How did you get capital to start this work? Own savings....bank.....micro credit.... Parents/siblings.....other
9. What other work were you doing before you started this one?
10. Where were you born?
11. How old are you? 18-25..... 26-35.....36-45....46-55.....56-65.....65+
12. How do you gain access to the trees for your lumbering activities? Purchase.... Free access... permit..... own.....other.....
13. Who grants you the access to the trees?
14. How do you maintain your access to the forests for your activities.....
.....

15. What are the terms of access? Reciprocal...benefit sharing....payment of token.....
Other.....
.....
16. How do you control your access to the forests for your activities?
17. Do you always get access to the forests for your activities? Yes...No...
18. If No why? It's not allowed...it's wrong...i can't afford the payment to get
access.....i will get hurt if I try.....other.....
19. What happens if you fail to get access to the trees for your activities?
20. What do you do?
21. Do you face competition from other chainsaw operators in getting access to trees?
22. Do you face any conflicts between you and the
farmers?...yes.....No.....how?.....
.....
23. If yes how do you resolve these
conflicts?.....
.....
24. Have you ever paid compensation to farmers whose crops may get destroyed as a
result of your activities before? Yes...No.....if yes how much
(estimate).....
25. Do these conflicts affect the income you get from the lumbering activities? Yes.....
No.....how?
26. What is the income you get from your activity? Daily estimate....
Weekly.....monthly.....annually.....
.....
27. Apart from the chainsaw operation that you do, what other benefits do you get from
the forest? Firewood..... .. Farming..... Wild fruits
other.....
.....
28. What is the price value of these other forest resources? daily
..... weekly.....
monthly.....
29. Do you have available market for your products? Yes.....No.....
30. How do you send your sawn lumber to the
market?.....
.....
31. Do you get help in selling your products at the market? YesNo... if yes
who.....
32. Does the presence of market for your product affect your access to the forest?
Yes...No.....How?

33. Who are your main co-operation partners?
Dealers.....carriers.....friends.....colleagues....other.....
.....
34. How many people do you work with(employees)....operators boys
35. What is their share of profit or salary?
36. Are you a member of any association? Chainsaw operator groups....savings club.....other.....
37. What kind of problems do you experience in getting access to the forests for your activities?.....
.....
.....
38. How do you deal or respond to these problems?
.....
.....
.....
39. Do you experience harassment/conflicts from the police and forestry officials?
Yes.....
No.....How?.....
.....
.....
40. How do you respond to them?
41. Do you have a permit /license to do this work? Yes..... No..... How much is it per year?
42. If yes who grants the permit? Local chief..... forest commission..... family heads..... landowners.....other.....
43. How do you get the permit? Lobby through forestry officials.....payment.....through family and friendship ties.....
44. If NO how do you get access to the forests to undertake your activities?
45. What do you think of the forest? Resources to be used.....forests to be managed.....other.....
.....
46. How in your view do you think your activities should be supported?
47. What is your view on the forests?
48. Other comments or questions
.....

Appendix Three

Interview guide for the group discussions with forest farmers and chainsaw operators

- 1, Local forest user's perspectives of the forests
- 2, the importance of the forests in their livelihoods
- 3, How access to the forests is gained and maintained
- 4, Why and how forest user conflicts occur
- 5, how these forest user conflicts are resolved
- 6, what is the way forward for managing and benefitting from the forests

Appendix Four

Interview guide for forestry officials

- 1, Forestry official's perspectives on the forests
- 2, the mechanisms of access to the forests
- 3, the importance of the forests
- 4, what are the ways of protecting the forests?

Appendix Five

Interview guide for key informants

1, Importance of the forests

2, Access issues

3, Forest user conflicts

4, The future of the forests (in terms of management and benefits accruing to all actors involved in benefitting from the forests including the state)