

A COLLABORATIVE APPROACH
TO FOREST RESOURCES MANAGEMENT
IN POST-WAR LIBERIA

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DAODA SOCRATES CARLON

DR. JOSHUA GRUVER-ADVISOR

BALL STATE UNIVERSITY

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ABSTRACT

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STUDENT: Daoda Socrates Carlon

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Forests in Liberia and Sub-Saharan Africa have suffered gross destruction and mismanagement due to unsustainable approaches in which forest resources were managed, especially during times of political conflicts. This destruction is caused by many factors, which begin with rural communities living in or near the forests, the state's failure to enforce rules and regulations governing the forests, and logging operations by foreign companies and foreign encroachment by neighboring countries. In recognition of the problem, several studies reveal that many Sub-Saharan countries, not including Liberia, began to revise their forestry policies in order to promote co-management of forests and other natural resources as early as the 1980s. It is also revealed that for many rural forest communities in the tropics, forestlands management has been and is still part and parcel of their livelihoods. These communities also consider the use of forest resources for present and future generations. In the case of Liberia, collaborative management in the forest sector is crucial as the country seeks to promote sustainable forest management initiatives in keeping with international treaties and protocols on forests and environmental health. Past research also showed that mismanagement of forests and other natural resources, tribal conflict as a result of unequal distribution of forests and other natural resources, and marginalization of rural people were a few of the many issues that plague and are still plaguing Liberia and other Sub-Saharan African countries. In the case of Liberia, mismanagement of forests and its related resources, particularly during the civil war, contribute to the present economic hardships, land tenure problems, and distrust between the national government and forest communities.

The real situation for Liberia is that new policies on decentralizing forest management began in 2006. In 2009, the “Regulation to the Community Rights Law with Respect to Forest Lands¹” was drafted into law. These laws and/or regulations are being implemented throughout the region, but until now, the government’s inability to evaluate their effectiveness for sustainable forest management exists, not to mention the Forestry Development Authority’s (FDA) shortage of trained personnel to monitor or enforce these laws and regulations. This research project is designed to overcome this problem through the use of a collaborative management approach to forest resource management, based on the views of affected forest communities in Grand Gedeh County. This approach supports the direct involvement of local people in the development and management of their forest resources and promoting local governance. This research was limited to two interview segments involving in-depth semi-structured interviews (n=34) and Key Informant (KI) interviews (n=6). KIs were government and local officials of the county. KIs helped the researcher to identify the affected forest communities and their views were used to validate semi-structured interviews. Participation was based on the following criteria: age 18 and above, residence status of the study area, proof of leadership of at least one year and above, familiarity of the research topic. Data collected were audio-recorded, transcribed, and analyzed confidentially using codes and themes. Based on the reviews and interviews, a content analysis was used to organize participants’ views as it relates to collaborative forest management policy. Other secondary data were collected from partners or NGOs.² This analysis led to the recommendation of a new approach to forest management in Post-War Liberia that is free of corruption and fair to all parties involved, including rural communities, and one that is easy to enforce with little or no financial cost to the government of Liberia.

¹ The purpose of this regulation is to establish rules, guidelines and procedures for the establishment, management, and use of community forests in Liberia (FDA, 2011).

² Non-governmental organizations, programs, and civil society organizations working in partnership with the government of Liberia to ensure the implementation of community forestry, ecosystem management as well as environmental management.

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LIST OF ABBREVIATIONS/ACRONYMS

ATU: Anti-Terrorist Unit.

“Blood Timber”: Is a phrase coined to refer to the illegal sale of timber by rebel forces or the use of timber proceeds to fuel armed conflicts.

Book People: A common adage participants used to reference the GoL and its international partners.

CFDC: Community Forest Development Committee.

CITI Training: Collaborative Institutional Training Institute, a required training that every student working with human subjects (IRB) or animals (IACUC) needs to complete prior to submitting proposals to the grad school at BSU.

Code: A word, number, phrase, or symbol assign to participants’ responses as they answered a question.

Code-coefficient: A unique cardinal number assigned to each code.

Coding: The process of organizing and sorting data into specific categories.

Coding Notes: Notes, ideas that the researcher jotted down during the coding process, which were later helpful in data analysis.

Concession: A contractual right granted by the community and authority to a private commercial enterprise, whether by negotiation, bidding or other legal means, to harvest and market forest resources for commercial gains.

Emergent Codes: Other codes, ideas, concepts, actions, meanings, and relationships that the researcher discovered while analyzing the data.

EPA: Liberia Environmental Protection Agency.

EU: European Union.

Europe Logging Company: One of the logging companies operating in Grand Gedeh County.

FDA: Forestry Development Authority.

FFI: Fauna & Flora International.

FIFES: Forest Incomes for Environmental Sustainability.

FMC: Forest Management Contract.

Geblo Logging Company: One of the logging companies operating in Grand Gedeh County.

GoL: Government of Liberia.

Grand Gedeh: A county in Southeast Liberia.

Green Advocate: Association of Environmental Lawyers of Liberia.

IRB: Institutional Review Board.

KIs: Key Informants.

LACE: Liberia Agency for Community Empowerment.

LPC: Liberia Peace Council.

MLME: Ministry Lands, Mines and Energy.

MOA: Ministry of Agriculture.

MOJ: Ministry of Justice.

MOU: Memorandum of Understanding.

Pre-Set: A list of codes created by the researcher after his interviews and prior to coding his data.

Resource Curse: Refers to the paradox that countries with an abundance of natural resources tend to have less economic growth, less democracy, worse development outcomes, and poorer families than countries with fewer natural.

SAMFU: Save My Future Foundation.

SCNL: Society for the conservation of Nature in Liberia.

Semi-Deciduous Forest: The term semi-deciduous forest is used botanically in the tropical rainforest to refer to plants that lose their foliage for a short period.

Sustainable Forest Management: The management of forests, according to the principles of sustainable development. It involves keeping the balance between three main pillars: ecological, economic, and socio-cultural.

The 3C's: Commercial, Community, and Conservation.

Theme: A combination of similar codes.

USAID: United States Agency for International Development.

Zedrew: The capital city of Grand Gedeh County

Chapter 1: INTRODUCTION

1.1 Statement of the problem

Forest communities in the tropics of Sub-Saharan Africa were persistently robbed of their resources and left poor and undeveloped by their own governments due to poor management policies. Today, one of the main issues facing Sub-Saharan African countries has been mismanagement of natural resources, including forest resources. As a result, this mismanagement often leads to civil conflict, economic inequality and corruption, and marginalization of rural people, who inevitably depend on these resources for their livelihoods (Thiam, 2000). Today, the “paradox of plenty”³ tends to baffle many Liberians, especially rural communities who are often the victims of this condition. Similar to many African countries, Liberia is one of the countries that is naturally fortunate with forest and other resources, but the majority of its citizens, especially rural people, are financially poor, while foreign companies and political elites benefit, largely, from the proceeds of these resources. Jarrett (2015) also confirms that rainforest communities across the Brazilian Amazon, the Congo basin, and South-East Asia are robbed persistently of the resources they depend on for their livelihoods and survival, which is no different from forest communities in Liberia. Thiam (2000) argues that nowadays, the African continent is described as one of the most severe victims of tropical deforestation due to human pressure on forest resources. Okrah (1999) argues that timber production accounts for most of the destruction in the tropical rainforests because loggers have concessions over a long period. For example, some of the concessions are signed for a 50-year period. A good example of this is portrayed in the new forest law of Liberia in which the Forest Management Contract is set to last for 25 years. In addition, forest destructions in Liberia are occasionally caused by local farmers, charcoal producers, and hunters, but the vast majority is caused by logging concessions that are not held liable, in most cases, for failure to follow forest regulations. Jarrett (2015) addresses this

³ Countries that are rich in natural resources are often—paradoxically kept financially poor, with the proceeds of natural wealth largely profiting political elites, foreign companies and commodities traders, rather than being used strategically to bring whole populations out of poverty (Max Bankole Jarret, 2015).

simply when he wrote, “it is often overlooked that forests too can be a curse to a country, not a blessing for countries that are rich in them” (p. 1). This is indisputably the case of Liberia.

During the fourteen-year civil war, Liberia’s forest resources, especially “blood timber,” were highlighted on the United Nations’ list as a major source of income for the different warring factions (UN Security Council, 2003). The term “blood timber” is a phrase coined to refer to the illegal sale of timber by rebel forces. This illegal exploitation of Liberian forest resources also poses serious environmental concerns to those communities that live near the forests. The worse of this is that rural communities have been marginalized, for many decades, when it comes to making major decisions about forest concession agreements and forest management policies even though they are the primary victims of deforestation and environmental degradation (Beevers, 2015). Most of this happened during the war. At this time, timber was a major funding source of the different warring factions, including the national government of former President Charles Taylor.⁴ The harvesting of wood, and other collateral damages by military operations and wildlife poaching, heavily affected Liberia’s forest sector (Rainforest, 2006).

Since this situation has a history of encouraging civil conflict, economic hardships, loss of lives as a result of forestlands tenure, and exploitations of forest resources by loggers, in Liberia and other African countries, the need to establish a CFM is paramount. This is especially true in the case of Liberia, in order to sustain the present initiatives on Sustainable Forest Management (SFM). SFM is the management of forest, based on the balance of three main components: ecology, economic, and socio-cultural. It is against this background that this research is designed to overcome these challenges through the use of a collaborative management approach of forest resources management, based on the views of forest-dependent communities in Grand Gedeh County, reviewing different information and collaborative forest management plans

⁴ Former Rebel leader of the National Patriotic Front of Liberia (NPFL) and President of Liberia from 1997-2003 (widely known for his participation in the fourteen-year Civil War in Liberia) (K. Suboe, Personal Communication, June, 2016).

in other African countries and legislations. This collaborative approach supports the direct involvement of local people in the development and management of their forest resources, promotion of local governance, increasing revenue from the forest sector, achieving sustainable forest management, and avoiding further conflict, based on the perception of unequal distribution of forest resources proceeds, and more education about SFM in all parts of the country. This approach is more likely to work in Liberia because it has a long list of success stories in other African countries, Tanzania, Gabon, Cameroon, for example. The author of this study believes that the economic inequality and socio-political instability caused by mismanagement of forest and other natural resources in Liberia inevitably has the potential to undermine many development projects, including rural communities' development, and decrease the forest sector's contribution to the national and local government's economies.

Chapter 2: LITERATURE REVIEW

This section of the study outlines the past and recent studies about the importance of forests to forest-dependent communities, how these communities use the forest and what it means to them. It also gives a brief overview of Liberia's political history, forest in Liberia, West Africa, and other studies on forest-dependent communities in the tropics, especially in terms of sustainable forest management initiatives. The second section gives an overview of the rights and stewardship challenges of tropical rainforests in Liberia, Africa, and in other tropical forest regions outside of the African continent. The next section focuses on forestry reform policies in Liberia and West Africa, with a critical comparison of other forest management approaches in the tropics that consider local people as a major stakeholder in the process. In addition, the next section gives an overview of the local use of forest and co-management efforts of tropical rainforests in Africa and other countries outside of Africa. Finally, the last section gives a basic profile of the impacts of the fourteen-year Civil War on forest management policies in the country.

2.1 An overview of Liberia's political history

Liberia is one of the smallest countries on the West Coast of Africa. It borders Sierra Leone to the northwest, Guinea to the north, Ivory Coast to the east, and the Atlantic Ocean to the south. The country was founded in 1822 and declared its independent in 1847. It is believed that prior to the arrival of freed slaves in Liberia, many of whom came from the Americas and Caribbean in 1822, there are 16 different tribes living in what was called the "Pepper Coast," Grain Coast," or "Malaguetta Coast." These were all names given by Portuguese sailors at the time and are based on the fertility of the soil (*Liberia: Past and present*, 2016). Those freed slaves that migrated to Liberia are known as Americo-Liberia or "mulattoes". These were several battles fought between the indigenous Liberia and the freed slaves. The country was ruled by the Americo-Liberians from 1822 until 1980 when a native Liberian, Master Sergeant Samuel Doe, took over through a bloody military coup launched by seventeen enlisted armed men, including Samuel Doe. This coup d'état led to the death of President William Tolbert and brought an end to the Americo-

Liberians rule, it is believed. Doe and his colleagues were members of the Armed Forces of Liberia (AFL). After the coup d'état Doe was chosen as a leader of the military junta because he was the only highest-ranking officer (Master Sergeant). This group later called themselves or referred to their leadership as the People's Redemption Council. Doe's regime was divisive, especially towards the Gio ethnic group, to the extent that some of his own government officials planned a coup d'état to remove him from office. An election was held in 1985, but it was said that Doe influenced the election and held power until he was assassinated in 1990 in a military coup launched in 1989 by Charles Taylor and a native Gio soldier named Prince Johnson. This began the fourteen-year bloody Civil War in Liberia (1989-2003), which eventually led to many, if not all, of the problems with natural wealth management.

After the death of Doe, Charles Taylor, head of the National Patriotic Front of Liberia (NPFL), launched several intensive attacks on the capital city of Liberia, fighting both Doe's and Johnson's soldiers. Taylor's intentions were to take over the executive mansion, which is the presidential palace, and to rule the country as a successor of Doe. Taylor succeeded after several battles with his breakaway INPFL leader Prince Johnson and former President Doe's AFL soldiers. Taylor ruled Liberia from 1997-2003 when he was forced to resign by the international community and different rebel forces fighting against him in the country. In August 2003, Taylor was forced to resign due to international pressure and pressure from the different rebel groups fighting his government. Taylor sought refuge in the city of Calabar, southern Nigeria. In 2005, democratic elections were held (*Liberia: Past and present*, 2016). Ellen Johnson Sirleaf became the first democratically elected female president of Liberia. Since then, President Sirleaf has been ruling Liberia. She was reelected in 2011, but her tenure will end in 2017. President Sirleaf had tried to mitigate some of the problems, but there are still many challenges, the issue of corruption, mismanagement of state's natural resources, environmental problems, the rule of law, and land tenure, among others.

2.2 A brief history of Liberia's tropical rainforests

Liberia is one of the countries that is blessed with one of the world's richest remaining forest zones, the Upper Guinea Forest (UGF). Liberia boasts of a biologically unique ecosystem that is one of the world's top priorities in terms of conservation. Eben (2003) argues that the Upper Guinea Forest is one of the 25 global hotspots for biodiversity and is host to the world's highest diversity of mammals. It begins from Eastern Sierra Leone and South Eastern Guinea through Liberia, Ivory Coast, the Republic of Ghana, and runs into Eastern Togo. Eben (2003) also argues that due to political conflicts in West Africa, threats to forests and other natural resources are intensified at uncontrollable levels. This is especially true in the case of Liberia. For instance, during the fourteen-year civil war, many of the forested regions were abandoned. The absence of local governments and the national government to enforce forest regulations and/or permits were all contributing factors to the depletion and unsustainable use of forests and related natural resources in the country. Eben (2003) further argues that population growth and an influx of migrant populations led to a declaration of war on natural resources consumption, especially forest resources, which local people used for agriculture, hunting, unregulated charcoal production, and shelter. Amanor (2003) also confirms that some trees in the West African forests are used by local people for carving canoes, mortars, culinary purposes, and furniture, while others bear fruits that provide important food and condiments. The author argues that there are other trees that are used for medicine, chewing sticks for dental cleaning and sponges, and other non-timber food products are sold in urban markets.

A more recent study conducted on Liberian forests shows that timber in Liberia is an economic source for the country, and it is spread across the rural parts, which makes it an important element of diffusion among the general population (Lamb et al., 2009). A good example of diffuse resources is fertile soil, which yields agricultural products that are consumed by the people. In Christie et al. (2007), the authors argue that logging activities in Liberia increased every year between 1986 and 2000 or during the civil war. By 1999-1997, the authors

believe that deforestation slowed down in Liberia, but kicked off again in 1999 with the arrival of new logging companies in southeast Liberia, especially the Oriental Timber Company (OTC).

This company, along with other local companies in Liberia and a neighboring country, Ivory Coast, intensified the rate of logging operations, which led to destroying the forests by building new roads to increase timber production at unprecedented levels. This led to a huge increase in the government's revenue of \$20 million United States Dollars (Christie et al., 2007). The authors also argue that Liberia's forest sector grew until most forest regions were under the control areas of the different rebel factions, which led to sanctions post by the United Nations in 2003.

Laurence et al. (2011) reveals how logging contributes to deforestation, violation of local people's rights and customs, corruption in the forest sector, and environmental degradation. This claim was compared to a scenario in Papua New Guinea when the government took the alarming step of stripping local communities of the key land-rights protections, which prevented the communities from suing the offending corporation for past or anticipated environmental damage.

It is also proven that forest tenure is another troubling issue in Liberia that is affecting the management of forest resources (Laurence et al., 2009, p. 298). Brottem and Unruh (2009) argue that because customary land tenure cannot be legislated out of existence, the contentious relationship about land ownership between the government of Liberia and rural inhabitants is a major problem. The authors also believe that since land tenure in postwar Liberia is volatile, such relationships detract significantly from the peace process. At present, Brottem and Unrum (2009) believe that the root cause of the land tenure problem in Liberia is a result of the massive confusion that exists on a range of legal, administrative, boundary, claim, and ownership issues. The confusion about which laws apply to whom and where, multiple changes in subnational boundaries and definitions and roles of administrative area, chiefdoms claiming a large portion of lands simultaneously, state, private interest, and informal group are all examples of land tenure problems in Liberia, the authors argue. All of this means that Liberia land tenure laws are either weak or not enforced by the appropriate authorities.

2.3 Rights and stewardship challenges of tropical rainforests

By the same token, the distribution rights to the forests, be it individual, community or the national government, are central to the determination of Liberian forests being classified as a diffused or point source nature resource (Brottem & Unruh, 2009). Most of the forested areas in Liberia are in places where different indigenous ethnic groups live. These groups have been living adjacent to or within the forest for many decades, in fact since the existence of the country. These people rely on the forests and other natural resources for their livelihoods, cultural traditions, medicine, and for subsistence farming (Lamb et al., 2009). This claim is also supported by other studies on forest-dependent communities in the tropics, especially Colfer and Byron's (2001) study that local people are practically perceived to be the most important actors in sustainable forest management. This perception is shared, not only by villagers in these communities, but government officials, traders, and timber company employees, the authors argue. Collen et al. (2011) also validated this when the authors wrote about the experience of Fauna & Flora International's mission to undertake a new project at the new Lake Piso Multiple Use Reserve in Liberia to investigate the cultural connections between people and nature. During this investigation, the authors visited four villages of different tribes in Western Liberia. Collen and his colleagues' discovery is not different from what other scholars had found out about forest-dependent communities in Liberia. Their findings reveal that participants use their forests for ritual practices, cultural training, protecting against storm and erosion. The authors also noted that certain clans had a special relationship with the nine crocodiles. In addition, Kideghesho and Mtoni (2008) argue that local communities around Serengeti National Park in Tanzania have historical and cultural relationships with resources in their area, even though to a large extent these relationships are interrupted by conventional conservation models supported by exclusive punitive policies. The authors also noted that by virtue, these communities bear most of the conservation-induced burden, such as property damage, loss of access to key resources, and wildlife-related accidents. The stringent strategy the Government of Tanzania employed was called "Operation Uhai." Uhai is a Swahili word for life. This strategy involves the army, police,

and wildlife rangers. It helped to minimize poaching to a large extent. Unfortunately, this stringent law enforcement intervention was a failure. The authors argue that it could not be sustained due to lack of resource constraints caused by insufficient budget allocation for the different law enforcement entities. The Serengeti region's inhabitants, like many other rural communities around the world, has subscribed to co-management as a way to move forward (Kideghesho & Mtoni, 2008). This failure compelled the government of Tanzania to search for a lasting and affordable approach to managing forest resources. Today, co-management has become a popular approach to the Serengeti region. Efforts are underway to empower local communities to take responsibility for managing wildlife and their lands, which in return would give the community some benefits (Kideghesho & Mtoni, 2008).

Colfer and Byron (2001) reveal supporting evidence that rural communities use forests and other natural resources for many purposes when they wrote that the people of Wong Garai, a town in West Kalimantan, Indonesia, were concerned about preserving their forests for long-term use because they have seen other communities in the area do the same. The community also saw other communities in said area, whose lands were logged. As a result, their forest was left with no building materials or places to hunt and gather food products, and their water was contaminated, which obviously led to a decline in fish population. The local leadership of the Wong Garai notified the district officer and told the logging company representative that they would not allow any cutting of trees in their community (Colfer & Byron, 2001, p. 287).

The forest is also a primary source for hunting and a sacred place where traditional societies such as the Poro and Sande societies of Liberia meet (Richards, Archibald, & Bruce et al., 2005). The Poro society is a secret society for men in Sierra Leone, Liberia, Guinea, and Ivory Coast, introduced by the Mande speaking people. The Sande society, in addition, is a meant to teach or prepare young women for their responsibilities in society. In short, these societies are informal institutions of learning in rural communities in Liberia, especially in Western Liberia. These activities, coupled with the lax regulation of the forest resources, contributed to forest

degradation and/or mismanagement in the country. Colfer and Byron (2001) also emphasize this in their study when they wrote that with little or no on-the-ground monitoring capabilities and trained staff by an external authority to monitor concession workers, the traditional local system is the only management that seems fully operational. Their work also demonstrates how local communities' stakeholders can be actively involved in the management process of forest resources. Also, Amanor (2003) stresses that the objective of community participation in natural resource management is to introduce efficient regulation to prevent degradation by rural producers by imposing community natural resource structures in areas where there was open access. This strategy, Amanor (2003) argues, empowers community organizations to control the use of natural resources by local people. In addition, with a total of 4.5 hectares of forestland, Liberia has the largest remaining portion of the Upper Guinea Forest in West Africa. (Lamb et al, 2009). With approximately 225 timber species, the forest also serves as a habitat for 2000 flowering plants, 140 species of mammals, 75 known reptiles, and 600 species of birds and amphibians, and more than 1000 discrete insect species, based on the Liberian Forestry Development Authority's (2008, 2006) reports. In a 2008 report to the World Bank, the FDA reported that, of the richest tropical rain forest in the world, Liberia's forest is a home to rare and endangered wildlife like chimpanzees and the endemic pygmy hippopotamus, and an area to one of the only 34 biodiversity hotspots in the world (FDA, 2008).

2.4 Forestry reform policies in Liberia and West Africa

Since the 1980s, a few countries in Sub-Saharan Africa, including Guinea, Nigeria, Burkina Faso, and Mali, began decentralization of forests and other natural resources. This reform resulted in a formal transfer of power and responsibility to manage forest and other natural resources in rural communities in Africa, which eventually established a trusting relationship between traditional authorities and national governments (Thiam, 2000). This decentralization of power to manage natural resources, which the researcher refer to as co-management of natural resources was found by other studies to be effective. This approach is also encouraged by international donors as a

possible remedy to resolve conflict and to improve economic development in rural communities in Sub-Saharan Africa (2000). In 2006 and 2009, for example, the government of Liberia drafted a reforest reform law and implemented the Community Rights Law with respect to Forest Lands. These pieces of documents were the beginning of Collaborative Forest Management (CFM) in the country. The Community Rights Law (2009) established a Community Forest Agreement, which is a written agreement between a forest community and the Forest Development Authority of Liberia that establishes a forest community within a specified area to access, use, manage, protect, and benefit from forest resources in a sustainable manner.

As part of its effort to conform to the international standard and donors' recommendations, the government of Liberia drafted a forestry reform law in 2006. This new law established the footprints for communities' participation in forest management and introduced the 3C's (Community, Conservation, and Commercial) in Liberia's forest sector. For example, the Sapo National Park and Lake Piso Multiple Use Reserve management plans focus on introducing a plan whereby local communities are able to participate in decision-making and engagement (FDA, 2013). The primary objective of the Lake Piso project is to protect the natural ecosystem of Lake Piso and to encourage the sustainable use of resources so that residents in those areas benefit from conservation initiatives (FDA, 2012). In addition, the government of Liberia also works in collaboration with other national and international organizations and ministries of government in order to promote community forestry. Some of those organizations include, but are not limited to, USAID, People Rules and Organizations Supporting the Protection of Ecosystem Resources (PROSPER), Conservation International (CI), Fauna & Flora International (FFI), Forest Incomes for Environmental Sustainability (FIFES), EU, Green Advocate, Save My Future Foundation (SAMFU), Liberia Agency for Community Empowerment (LACE), Society for the Conservation of Nature in Liberia (SCNL), Ministry of Agriculture (MOA), Ministry of Justice (MOJ), Ministry of Lands, Mines and Energy, and the Environmental Protection Agency of Liberia.

In addition to Thiam (2000), Kimani (2009) argues that a UN-joint project on environmental regulation began in 1994 to help African countries strengthen their environmental policies. The aim of the project (Partnership Project for the Development of Environmental Laws and Institutions in Africa, PADELIA, according to Kimani, was to enhance the capacity of African countries in sound environmental management practices through the development and implementation of environmental laws. This was meant to strengthen African countries' environmental institutions and to promote sustainable development as well. The following countries participated in the first phase of the project: Burkina Faso, Kenya, Malawi, Mozambique, Sao Tome and Principe Island, Tanzania, and Uganda. By the end of the second phase in December 2006, thirteen African countries got involved. The unique benefit of the PADELIA project is that it linked all activities to poverty reduction strategies and sustainable development. It also created a culture of nationalism and participation by nature. Beneficiary countries could identify their own environmental problems, determine their priorities, build national consensus and implement activities using national expertise, which ensures national ownership (Kimani, 2009). Amanor (2004) also argues the participatory forest management has been an established principle in most donor-supported programs in West Africa. This process of decentralization, which began in the 1980s, the author argues, is a movement to involve local people in natural resources management (Amanor, 2004). The process of Collaborative Forest Management is recognized in a number of international environmental conventions. For example, it gained prominence at the Rio 1992's Earth Summit and the United Nations Convention to Combat Desertification. It was also embraced by the UN Intergovernmental Panel on Forest Proposals Action, which recognizes the participation of different mechanisms that involve all interested parties, including local communities and indigenous people, in forest management policy (Amanor, 2004). In the 2009, Act to Establish Community Rights Law in respect to forest lands, the government of Liberia, in keeping with international treaties and protocols, recognized the need to uphold the rights of local people to control and make decisions

about the development and use of their lands and resources (Community Rights Law Act of 2009). In an article entitled *Participatory Resource Mapping for Adaptive Collaborative Management at Mt. Kasigau, Kenya*, Kalibo and Medley (2007) argue that community conservation arose as an important planning approach in Africa since the 1980s because of the need to better reconcile human needs and involve local people in the management of natural resources.

The authors also argue that forest management planners need to find a sustainable balance between the conservation of biological diversity and the continued supply of materials and services to those who depend on the forests for their livelihoods (Kalibo & Medley, 2007). Thiam (2000) also argues that as early as 1981, the West African State of Burkina Faso elaborated the classified forest management policy, which was established to meet the needs of local people in forest products management as well as to protect the environment. Thiam (2000) also argues that forest management policies, plans, and program reforms increased rapidly in Francophone West Africa, following international donors' recommendations. All of the countries that were successful in forest management rewrote their national forest policies, including the National Forest Action Program (NFAP) and their National Environmental Action Plan (2000).

2.5 Local use and co-management efforts of rainforests in Africa

Similarly, Thomas (2009) also argues that the most valuable assets of any traditional community are its lands and its culture. Liberia is no exception to this. Rural communities in Liberia use their forests to perform rituals, for hunting purposes, swidden farming, and cultural and medical purposes (FrontPage Africa, 2015). For example, a study on the use of certain rites in the sustainable management of natural resources was conducted by Professor Colfer and her colleague in the Central African Republic of Gabon. This study shows how effective traditional authorities were in the protection of natural resources and the environment, especially punishing those who violated local rules, no matter their status in the town or village (Colfer & Byron, 2001). In addition to the study in Gabon, Colfer and Byron (2001) argue that the Mboko tribe of

northern Congo-Brazzaville traditionally set up strict rules regulating access to sea resources is an additional source of rural people's willingness and capability to participate in the management of natural resources (Colfer & Byron, 2001). Thomas (2009), in addition, provides another important side of collaborative management of forest resources when the author talks about a 2005 pilot partnership with the Hewa people in southern Papua New Guinea. The population of these people was less than 2000, but they inhabited a forestland of about 65,000 hectares of hilly forest. Similar to other rural communities in Liberia and the tropics, there were no roads in Papua New Guinea. The people there had no economic opportunities. Many of them were subsistent farmers, according to Thomas (2009). For these people, the forest steward's initiative was an opportunity to develop a sustainable source of income that would improve their lives without sacrificing their land to logging or mining interests. Even though the Hewa territory was designated as an area of conservation priority, the national government of Papua New Guinea expected conservation initiatives to be generated entirely by local landowners. The author reveals two challenges that the Hewa people face as they undertook this initiative. One was to establish legitimacy and develop a pool of local experts. The second was to identify a group of local experts that would be accepted by the wider community as their forest stewards.

The authors also argue that these challenges are common to anyone trying to initiate a collaborative approach of resource management. Eben (2003) argues that even though CFM has the potential to improve the lives of rural people, in terms of job creation, intellectual development, telecommunication facilities during the time of extracting operations, there will be some challenges. Such challenges include, but are not limited to, direct benefit flow to communities, the uncertainty of rights, responsibilities, and roles in the CFM decision-making process. CFM is conceptually defined as the working partnership of key stakeholders in the management of a given forest. Key stakeholders, in this case, are forest-dependent communities and government forest departments and agencies, as well as civil society organizations and nongovernmental organizations and the private sector (Carter & Gronow, 2005). The author also

believes that the success of CFM will only be achieved if the process involves trust, transparency, and commitment (Eben, 2003). This is a good example of a community taking responsibility for local natural resources management. In addition to this study, Mahanty et al. (2009) also argue that the collaborative approach of forest resource management has drawn the attention of many countries in Asia and the rest of the world, especially in recent years. The authors believe that this led to a 25 percent increase in forest management and related natural resources outside of direct government's management.

The authors also believe that many advocates of Collaborative Forest Management (CFM) suggest that it has the potential to achieve sustainable forest management in a way that is more likely to improve rural peoples' welfare. Mahanty et al. (2009) argue that whether or not this potential is achieved largely depends on the type and scale of benefits created through CFM in relation to costs, whether or not the community is able to secure any of these, and how they are distributed locally (p. 268). Some of the potential benefits that the authors foresee are social, economic, and environmental. The social benefits of CFM are said to strengthen existing coordination and governance mechanisms, which in return, improves relationships and networks, political empowerment, strengthens land tenure, improves capacity building, and welfare and stability. The economic benefits, the authors argue, would increase access to non-timber forest products (NTFPS) and timber for direct household use, income from the sale of NTFPS, agro-forestry yields, and employment opportunities. Finally, Mahanty et al. (2009) believe the environmental benefits of CFM include maintenance of environmental services such as biodiversity, soil health, agricultural productivity, sequestration, and air and water quality. In addition to these benefits, the authors also argue that the cost of CFM to rural communities could be a foregoing alternative use of land, which brings greater economic benefits such as time and labour invested, negotiating property rights, rehabilitating managing forests, and monitoring compliance with rules (Mahanty et al., 2009). Bruenig (2016) also argues that presently, the costs and benefits in tropical rainforests are neither transparent nor equally shared. The nation often

bears the cost of the inadequacies, socially and fiscally. Environmental damage, especially flash-floods, pollution and silting of water bodies, destroyed trees and eroded soil, and damage to the productive resource are all borne by the government (Bruenig, 1996). At this point, the author believes that the most difficult approach that tropical rainforest managers face is the assessment of the present value of losses of future increment and yield, which is caused as a result of overuse and mismanagement. "The net proceeds from the state land forests must be fully invested in the development of productive enterprises and human resources to meet the conditions of sustainability," (Bruenig, 1996, p. 90). In reality, this is barely the case, the author continued. Illegal logging and transfer of forest proceeds from logging concessionaires out of the producing countries by means of volume adjustments and transfer price arrangements are vague in contemporary forestry in many Third World countries, not only tropical countries, the author argues. In regards to the diseases and health hazards that that logging creates, the author argues that logging generates not only health hazards by the high accident rates, which is about four to six times higher than in Germany, for instance. It also introduces new contacts to vector-borne diseases, especially if there is not qualify health care in the logging communities.

Kimani (2009) argues that a collaborative approach to environmental governance, which is presently ongoing in Uganda, Kenya, and Tanzania under the supervision of the United Nations Environmental Program-administered project, is a prospect for both state and non-state actors to successfully work together in regional development. Kimani (2009) also argues that it could be viewed as a means of conflict resolution, where parties get together to define the problem, establish a common agenda, and implement a solution. Further, the author believes that this collaborative approach to natural resource management is significant to a democratic political system because it allows diverse actors who are close to the problems to foster a more creative approach to solving regional problems.

Richards et al. (2009) found that community participation and consensuses underpinning any community-driven development activities in Liberia are too optimistic, yet it is worth considering. As senior experts at the Center for International Forestry (CIFOR), Colfer and Byron (2001) argue that traditional forest management was a system rural communities use in upland farming to show ownership of upland fields, prohibitions and regulations about land and other resource use, and to settle disputes over natural resources. Similar to the traditional forest management, the Agroforestry management system is used by the communities in Benuaq Dayak to recognize forest successional stages (Colfer & Byron, 2001). The authors' argument is based on a study conducted among the Benuaq Dayak community of East Kalimantan, Indonesia. This study provides a detailed overview, using participants' observations to examine the concept of conservation practices of forests and other natural resources in rural communities.

Kittredge (2004) introduces a completely new approach to the concept of collaborative management of forest resources. He argues that family forest owners do not make decisions about their forest/land without considering future implications. Their decisions are influenced not only by their own attitudes and circumstances, but also by the prevailing situation in which their land is located. Another serious concern that the author of this article raised was whether or not the forestry community will be in the position to meet the challenges presented by an increasing number of family forest audience that has a diverse use of their land. This question, the author believes applies to foresters that are involved in extension and other forms of outreach. This argument is based on the article, *Snappin's Them Red Suspenders: Introducing Forestry Students to the Rest of Society*, which states that forestry schools should revise their curriculum in order for new foresters to acquire the necessary social skills needed to succeed in community outreach projects (Egan, 1996). One of the challenges that Kittredge (2004) pointed out was that fewer than five percent of family forest owners have a written management plan, but whether or not they are being properly advised on the sale of their timber and the management of their land is

another thing. This article validates that collaborative approaches to managing forests and other natural resources are the best way forward.

2.6 The impacts of the Civil War on forest management in Liberia

The fourteen years of civil war in Liberia results in a class of marginalized young people who currently lack trust in their government or any kind of institutions for that matter (Richards, Archibald, & Bruce et al., 2005). These young people, who make up more than half of the population in the country, believe that the administrative justice has failed them. As a result, these young people preferred to take chances with various rebel groups during the civil war (2005). In order to erase these beliefs, a study suggested that a new peacebuilding approach is necessary. This new approach, authors argue, is an inclusive Community-driven Development (CDD). Richards and his colleagues (2005) also argue that this process is capable of playing a crucial role in shaping different kinds of societies, provided those societies incorporate marginalized and socially excluded populations in the rebuilding process. This new approach calls for equal participation of all interested parties in the distribution and management of states' natural resources. No study reinforces this better than chapter nine of Colfer and Byron (2001). In this chapter, the authors argue that any collaborative management of forest and other natural resources, which takes into consideration traditional knowledge, using local authorities to protect natural resources should not be overlooked. Other scholars also recognized the management capabilities of local people. For example, Joiris (1996), claimed that given that ecosystem biodiversity in protected areas did not undergo significant degradation due to local management strategies, such populations should be regarded as possessors of a certain technical know-how of the rational use of forest ecosystem (Colfer & Byron, 2001).

Based on the information that the researcher learned from the literature, it is likely that the mismanagement of forests and other natural resources has the potential to decrease the forest sector's contribution to the national and local government's economy, increase environmental degradation and pollute drinking water in rural communities. Moreover, it has the propensity to

create an atmosphere of distrust between the national government and rural communities that live adjacent to the forestlands.

Chapter 3: METHODS

The researcher departed from Indiana in May 2016 to Monrovia, Liberia. During the researcher's three-month stay in Liberia, the researcher worked at the Forestry Development Authority as an intern. During this time, the researcher conducted some of the Key Informant (KI) interviews with stakeholders and representatives of Grand Gedeh County and collected other secondary information on community forestry in Liberia from organizations working in partnership with the Government of Liberia. Prior to traveling to the county, it was customary that the researcher got an approval letter from the FDA's head office in Monrovia before conducting any research in affected forest communities in the county. The researcher abides by this procedure. It took the researcher three days to obtain the letter, but the letter was helpful because without it, the FDA's regional office in the county would not have recognized the researcher's presence in the county. After the researcher obtained the approval letter, the researcher traveled to the county to conduct the second set of interviews (semi-structured) with the actual participants of the study. These participants were mostly subsistent farmers, local businesswomen, hunters, town chiefs, and elders. The researcher hired two local residents in the county to accompany him to the affected forest communities and to assist him with the interviews. The roads leading to these communities were muddy, dangerous, slippery, and unpaved for cars, so motorcycle was the best option to getting there. As a result, the researcher hired a local motorcyclist on a daily basis to drive the researcher and his assistant from the researcher's hotel in Zedrew, the capital of the county, and back. Some of these trips were made at night driving through the densely forested road of the county and through the sudden fall of rain. The entire data collection process ran from May to July 2016. The researcher is also a citizen of Liberia, born and raised in the Southeastern region of Liberia, attended the University of Liberia where he participated in student politics. All of these provided many opportunities for the researcher to connect to the communities and their government officials in Monrovia. The forest region in which the research was conducted was familiar, providing an opportunity for the researcher to spend extended time in the field under

extreme weather conditions. Additionally, familiarity with the area allowed the researcher to develop a fuller understanding of regional context, which also aided in gaining access to the research population. After the interviews, the researcher returned to Ball State University in August, met with his faculty advisor and members of his committee to report some of the challenges he faced and the data collected. The researcher began data transcription and analysis in the fall semester of 2016.

3.1 Study Area and Research Population

After gathering some information from the KIs and the FDA about affected forest communities in Sinoe, River Gee, and Grand Gedeh counties and the road conditions to travel there, the researcher dropped Sinoe and River Gee from his travel list. Roads leading to these counties were almost completely damaged due to the rainy season; therefore, it was riskier and costly for the researcher to reach participants living in those two counties, except Grand Gedeh. Grand Gedeh was, therefore, chosen because of these conditions, but most importantly, because of its geographical proximity to Sinoe and River Gee counties and is a center of the forest regions in Southeastern Liberia. Since it is evident that forest communities in this region share similar problems, Grand Gedeh County was a perfect location for this research. The county was also chosen due to its geographical location in the region. In other words, it is located in the heart of affected forest communities in Southeast Liberia. Besides, it had a better road condition than Sinoe and River Gee counties.

Grand Gedeh is one of the largest counties in Liberia. The interviews took place in four towns and/or villages. These four towns and/or villages were within the Konobo and Tchien districts. Towns and/or villages were selected based on their proximity to River Gee and Sinoe counties, the presence of logging operations, and their classification as affected forest communities. Ten participants were interviewed from the first village, ten in the second, seven from the third, and seven from the last. In recognition of traditional authorities, the Town Chief of each town or village was interviewed first, followed by their respective local leaders and the rest

of the community members. This rule, recommended by all participants as the locals refused to be interviewed first before the Town Chief, was common in all of the towns/villages.

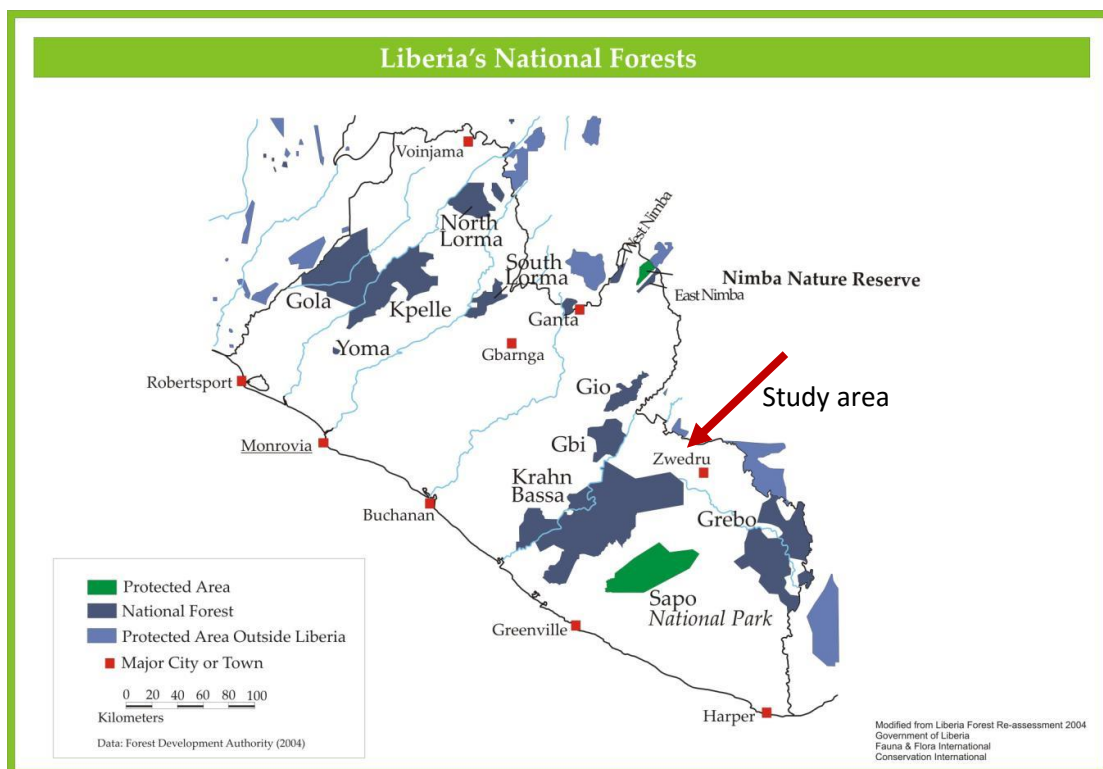
The county shares borders with the Republic of Ivory Coast and has some remote villages and towns due to its distance from the capital city of Liberia. Traveling between Monrovia and the county requires a 4WD-built vehicle and could take up to a day or two, based on the road conditions and the time of the year. It sometimes takes longer than a day or two when traveling with commercial vehicles. Another difficulty was riding on muddy and wet roads with a motorcycle with two other people to get to the villages. Anything could happen. In fact, we had a minor accident. The motorcycle slipped as we were going down a slippery and red muddy hill. The researcher was able to jump off the motorcycle before it fell to the ground because he was seated at the back. No one got hurt. The bike rider picked it up as if nothing had happened and we all got back on it and continued our journey.

Other sites in the county require additional travel on foot, or by motorcycle. The climate in the research area is wet and tropical. The main ethnic group residing in the area is Krahn⁵. The absence of written materials about their history and culture means that a researcher must rely heavily on oral accounts or traditions, which could vary, based on both localities and the researcher's ability to elicit stories. This remoteness, in effect, tells how much the area is neglected. The level of education in the communities is low. This is perhaps due to lack of facilities and the government's agenda on education. This low level of education plays a role in the communities' high dependence on forests and other natural resources. Generally, people make a daily living by farming and selling bush meat in the nearby cities. These communities have no law enforcement structures, but rely heavily on traditional authorities as their chain of command. This kind of authority is often effective in many rural communities in Liberia.

⁵ Krahn is one of the major ethnic groups in southeast Liberia that played a major role in the fourteen-year civil war. It is the Ethnic group of the late Master Sergeant Samuel Doe, former leader of the People's Redemption Council and President of Liberia (B. John, Personal Communication, June, 2016).

There are possible advantages of using this county as a true representation of the research sample. The first is that intermarriages are common in Southeastern Liberia and Grand Gedeh being the center is a home to many inhabitants from Sinoe, River Gee, and Maryland counties. Secondly, Grand Gedeh is part of the Greebo-Krahn forest. Finally, it has forests that are presently exploited by foreign companies, based on concession agreements. The populations of this research were dominantly rural people from Grand Gedeh and some of their elected government officials in Monrovia. Many, if not, all of the rural participants were farmers, natives of the county, or a mixture of men, women, traditional authorities, and youth. The majority of the rural people were people who had not seen the capital of Liberia, but were well abreast of how to manage forest resources, based on traditional knowledge. Throughout this research, participants' direct locations, names, villages, and towns are withheld in order to maintain the researcher's confidentiality promise.

3.2 Figure 1.1: Map of Study Area



Map by FDA's GIS Department

3.3 Research Methodology

This qualitative study is based on the Grounded Theory methodology, a design of inquiry from a sociological perspective in which a researcher derives a general abstract theory of a process or interaction grounded in the views of participants in a study to analyze the data. This theory has two unique concepts: the constant comparison of data with emerging categories and a theoretical sampling of different groups to maximize the similarities and differences of information (Creswell, 2009, p. 13). The basic concept of this research method is to choose research participants who have lived through the phenomenon that you want to study. This meant that participants are experts of the phenomenon that the researcher sought to understand (Auerbach and Silverstein, 2003). These techniques involve a): filtering texts, which means explicitly stating your research concerns and theoretical concerns and selecting the relevant text from your interviews, which is done by reading through the transcripts one-by-one with step one in mind and highlighting relevant codes; b): listening to the transcripts for relevant information, which involves recording repeating ideas by grouping together related passages of your relevant codes and organizing these by grouping repeating ideas into coherent themes, c): Developing theory, which is the final phase in which the research construct a theory by grouping themes into more abstracts concepts consistent with your research purpose and create a theoretical narrative by telling the participant's story in terms of the theoretical constructs (Auerbach and Silverstein, 2003).

The research methodology works well with content analysis, a data analysis method that involves reading through large texts and carefully listening to recordings in order to make notes of impressions and emotions, one-by-one reading transcripts to identify similarities and consistency, and labeling relevant words and phrases to come up with codes. In addition, this methodology is suitable for this research because its procedures lead to the emergence of conceptual categories. As such, the research relies on participants' narratives as the driving force of this study.

Based on a comprehensive analysis of this research method, its techniques were best suited for this study, especially given the researcher's lack of complete understanding of the phenomenon prior to the research. This method was chosen because it helped the researcher to make comparisons of the diverse views of participants on the topic, and compare and contrast the different demographics of participants to understand the phenomenon. The challenges of using this theory were handling, organizing, and storing of the raw data, which if not carefully managed, could lead to bias and inaccuracy. These challenges, however, are perhaps common to all research methodologies. In the case of this research, these concerns are paramount because losing or improper handling of the data could mean traveling back to the study area to reconduct interviews.

3.4 Participants Breakdown: Key Informants

Six KIs were interviewed in their Monrovia offices and homes, while others were interviewed in the county. Four of these KIs were from Monrovia and two were from the county. Key Informants are people who know what is going on in a given community. The purpose of their interviews is to collect a wide range of data from the research communities' leaders and professionals, prior to interviewing residents of the communities. In the case of this study, the researcher relied on KIs to authenticate participants' concerns. These KIs were government officials or representatives of the county and local representatives of the Community Forestry Development Committee (CFDC). Some of these participants were interviewed prior to the researcher's travel to the county. Their responses helped the researcher, to some extent, to identify the affected forest communities in the county. After the researcher returned from the county, the interviewee's views were used to validate the data that was gathered in the field. These KIs also serve as a snowball sampling or referrals of this research to recruiting future subjects from among their associates. According to Creswell (2009), a snowball sampling is when a researcher asks participants to recommend others to be studied or interviewed.

These interviews were audio-recorded, based on participants' consent and were followed by a questionnaire, comprising of nine questions. The questions included, but were not limited to, participants' awareness as to whether or not logging activities in their county present any problems, how often they visit their county, and whether or not their people complain about logging operations. Before the interview began, participants were told the research purpose and given a copy of the Institutional Review Board's (IRB) consent form and each signed the form. This form explains the rights and responsibilities of participants in any research and was obtained after the researcher completed Ball State University's office of research integrity CITI training. This training took about one to two weeks to complete and contained a series of online modules, followed by quizzes after each section that must be passed before one is certified. The researcher read the rights and responsibilities of participants who could not read or who were not interested in reading the form. The interviews were done separately and each lasted no more than 30 minutes.

3.5 Participants Breakdown: Semi-Structured Interviews

The semi-structured set of interviews (n=34) involved those people who are living in or adjacent to the forests in the county. In recognition of traditional authorities, the interviews were conducted based on participants' rank in the communities. The first person the researcher interviewed was the Town Chief of each community and their respective local officials followed by the rest of the community members. The first participant the researcher approached to interview refused, but recommended that the Town Chief be interviewed first as a courtesy. These participants are the primary population of this research because their views contribute to the present sustainable forestry initiatives in Liberia in terms of modifying forest management policy to achieve CFM. These participants were individually interviewed from the beginning, but due to the usual momentum to participate in the study, participants began to form focus groups of five to six people in subsequent interviews. As a result, some of the interviews were conducted as a focus group, but each participant was given time and opportunity to speak individually, agree

and disagree with one another's views, and this went well. The researcher made sure that each participant in the focus group participant said their name and gave their occupation before they spoke. This strategy was intended to help the researcher distinguish the different participants in the focus group interviews. Similar to the KIs, each participant signed a copy of the IRB's consent form before the interviews began. In addition to that, the researcher read to each participant their right and responsibilities, prior to the interview. These interviews lasted for 30-45 minutes, followed by a questionnaire comprising of 12 questions. These interviews were audio recorded as well.

3.6 Data Analysis

Data were transcribed accordingly; using content analysis to assign codes, co-efficient, and themes to the transcripts according to individual units of meaning concerning the research topic. Codes were arranged into relevant themes and the various themes were used to identify commonalities across the interviews. These themes were formed using the Grounded Theory's techniques of managing raw data. During this process, all identifiable data (name, date of birth, title, etc.) from participants were kept confidential and maintained confidentially at all times. Besides, no identifiable data (i.e. names, title, and date of birth) will appear in any presentation or publication of this research. Finally, themes, in this case, were used to identify repeated ideas across interviews.

3.7 Data Validation/Reliability

Data reliability and validity are also important criteria for both qualitative and quantitative research because they are meant to assure readers that measuring scales use in the research are objective. A scale, in this case, is defined as valid provided it measures what it claims to measure (Auerbach and Silverstein, 2003). In the case of this research, the scale that was used to validate data was data triangulation. Data triangulation is a powerful technique that facilitates validation of data through cross verification from two or more sources. Similar to data corroboration (which is widely used by historians to confirm or support an account), triangulation works by analyzing a

research question from multiple perspectives. In order to improve accuracy, credibility, and validity, these data collected were matched with other regional publication in national newspapers, magazines, records in government offices, and data from international NGOs working in line with the GoL on SFM. These measures are important for this study since the research is based on a representative sample of the population.

In addition, the coherence of participants' concerns, including their KIs shows how reliable the data were, especially participants' willingness to have an open interview about the issues they believed are undermining the development of their communities. Another observation that showed reliability was participants and KIs appreciation of the study. For example, some communities said it was the first time a researcher had visited their communities to ask them about their problems and how to fix them. Some participants also believed that even if nothing is done about the research findings, the government of Liberia will hear their broken cries through this study. These concerns and other emotions of appreciation and relief, expressed by both participants and their officials are good signs of consistency and reliability.

In addition, several steps were taken to reduce bias and increase accuracy in the study. To achieve this, the researcher used contextual analysis of regional publications and printed information sources that were similar to the research topic. These publications and information sources helped to validate the views of rural communities and key informants. Direct quotations were used in the final analyses to describe themes. This is meant to provide external validity in the final report.

3.8 Research Challenges

This section of the paper gives an outline of the challenges that the researcher faced during his data collection. The section also gives recommendations to future researchers and students who might wish to conduct research in developing countries, especially in Liberia and Sub-Saharan Africa. In addition, the section gives an insight on the advantages and disadvantages of an insider

researcher and an outsider researcher from the researcher's perspective. An insider researcher, in this case, is someone who is a native of the country, while an outsider is a reverse.

When the researcher arrived in Liberia in May 2016, which is typically the rainy season, the first problem that I encountered was that the roads leading to the research area were closed, due to collapsed bridges and the rain. This was the beginning of the difficulties that the researcher encountered during data collection. The researcher got some recommendations from the FDA's personnel who had just traveled from that region of the country. Some of the recommendations included, rent a 4WD vehicle, which was costly (\$100.00/day, not including fueling), drive your personal vehicle, which did not exist. Taking public transport was never an option. These recommendations, I supposed, were based on the fact that once you come from the US, many would perceive that you have enough money to do almost anything. This is a common belief in Liberia.

Another difficulty was interviewing KIs in Monrovia. All of them had busy schedules, like any senior government official would. After two weeks of trying to make an interview appointment, which in many cases, were not successful, the researcher came up with a different idea. The researcher called KIs' offices and asked their chief of staff if it was okay that he scheduled to meet with KIs at their residence. The staff told the researcher that it was a brilliant idea because many of the officials stayed home longer during the weekends. This solved the problem.

As a Liberian, I was not afraid of the obstacles that I thought I was going to face. I was looking forward to learning from the difficulties. Besides, going back to Liberia to conduct this research or work is something that I enjoy. Many participants, especially those ones who knew what it meant to travel from the U.S. to Liberia just to conduct a research for schoolwork, appreciated this and respected me for what I was doing for their communities. One participant, a local carpenter, said he wished one of his children would become like me one day. Not so much

of the education that I have acquired, but the fact that I came from the US and decided to go to Liberia to conduct this research was incredible to them. That homecoming is what participants really appreciated. Of course, it would have been different for a different national, especially someone from, let us say Europe or the Americas. Participants would not have easily believed them if they said the research was intended for schoolwork. This is due to their perception that foreign NGOs' workers have money or make money out of their stories. I could be wrong, but this is a common notion in many research communities in Liberia and Sub-Saharan Africa that every researcher needs to keep in mind. Despite the fact that the researcher was a Liberian national, he still encountered an incident in which a prospective participant, who happens to be one of the heads of the CFDC in the county, argue that the researcher was going to make money out of the data. This prospective participant refused to be interviewed unless the research compensated them. This was, however, rare. My advice to anyone going into such environment, is that they should go with an open mind and try as hard as they can to blend in. This is very important, especially if you want to get more accurate and authentic data.

Chapter 4: RESULTS/STORY: KEY INFORMANTS INTERVIEWS

This section provides KIs' views regarding some of the undermining issues of the present forest management initiatives in the county and what could be done to address or mitigate the problems. The discussion in this section is based on the themes that were generated from analyzing KIs' interview data. Some direct quotes are provided to emphasize key points and how strongly officials believed those concerns could lead to a successful Collaborative Forest Management.

Key informants were asked questions about how often they visited the counties . . . (see Appendix A). Additional responses were explored when KIs were asked about whether there was anything else that they wanted to talk about that the researcher did not ask.

4.1 Figure 2.2: A list of KIs interviewed

Name	Status	County	Location during interview
Rep. One	Government Rep.	Grand Gedeh	Monrovia
Rep. Two	Government Rep.	Grand Gedeh	Monrovia
Rep. Three	Government Rep.	Grand Gedeh	Monrovia
Rep. Four	Local Rep.	Grand Gedeh	In the County
Rep. Five	Local Rep.	Grand Gedeh	In the County
Rep. Six	Local Rep.	Grand Gedeh	In the County

The following themes are based on direct quotes to support participants' concerns regarding each theme: (a) Bad governance-No development; (b) Unequal distribution of state's resources; (c) Watchdogs of the forest we can manage it better, (d) Direct representation – including our government reps; (e) Reasonable alternatives of livelihoods, and (f) Breaking promises. These themes will be discussed and referenced in subsequent sections.

4.2 Bad Governance/No Development

KIs always mentioned bad governance in their responses to the questions. They blamed the government for being responsible for the conditions of their forest communities in terms of no development, lack of education and jobs and roads, as well as lax regulations, which in many cases lead to exploitation of forest resources in these communities.

“Not much, but I would like to emphasize that management of resources by FDA and the executive should be sensitive to the needs of the people. Development projects should be decentralized into those communities.”

These representative views about bad governance were not about forests only. It was about using the proceeds from the sale of forest and other natural resources in all parts of the country to create employment opportunities, to provide basic development in rural communities (i.e. roads, schools, hospitals, clean and safe drinking water), and that the GoL should stay in touch with rural communities to know what their needs are. This view was shared by a majority of the KIs.

“Yes! Even though you touched everything, but for me, the government needs to do more. You know, the people are the custodians of the resources. They should have at least roads. Road is the beginning of development. Without it, our communities will remain dwarfs. It is pitiful and saddened, but what can we do as representatives of the people?”

“Yes! I think the government and their investors need to understand that things have or are changing, the society is opening and that they should not mistake the society to that of the past. If the investors are to operate smoothly, they need to be fair to encourage the communities” [sic].

“The MOU is just an overview of the legal agreement that was already signed between the government and the logging company. So, the government sometimes creates all of these problems. But the investors too need to be considerate to create an enabling environment to invest.”

KIs are still acknowledging that the national government is the obstacle of the many problems that these forest communities face. They blamed the national government for not doing much to distribute the forest resources and openly involving rural communities in concession agreements and forest management initiatives.

4.3 Natural Inhabitants of the Forests

KIs believe that rural communities are natural inhabitants of the forest and as such, they deserve or have certain rights and privileges of its resources. They strongly believe that rural communities should be part and parcel of forest management policies and/or decision-making.

“In the past, forest concession matters were done behind closed doors. But given the movement of things now, young people are getting educated about these things as well as the communities themselves. If there are any defaults in the future, I am sure people will point out the fraud either through diplomacy or violent means.”

This KI’s statement emphasized that nowadays, many young people, including forest communities, in the country are becoming aware of logging concessions and forest importance. Their comments also acknowledged that things are changing in the way in which forest concessions and forest management decisions are made as compared to the past.

“Yes, yes, yes! We the lawmakers of the county are pushing this through the Good Governance Commission. Our people are not benefiting any except the few in leadership (i.e. superintendent, town chief, and the Ministry of Internal Affairs). Our people should have the right to own if not all, but part of the forest and the remaining to the national government. This led to the community right law of 2009.”

“Yes! They should. My point that I am stressing is to break the gap. The local leaders of those communities should be at the table of agreement so that if there are problems, these leaders will address it immediately. The people should make their decisions, but their political leaders should be at the table of discussion. For example, the forestry reform laws of 2006 brought into being two agreements between the government of Liberia and the local people.”

In addition, even though KIs could not give more detail about the government’s plan to decentralize forest management, one emphasized that the effort to include rural communities in forest management is going on now in the country with the help of the government’s agency of forestry and other international NGOs and foreign governments. This is what one KI had to say about this:

“Yes! I think it is going on presently. A few years ago, committees were set up at the county level through the FDA and other international partners. Communities are compensated to keep their forests. The Norwegian government is one of those partners.”

4.4 Direct Representation—including government Reps.

A majority, if not, all KIs believe that the forest communities should be involved in the decision-making process of sustainable forest management and concession agreement. Informants also raised a salient point in their response to one of the questions, direct involvement. These informants believe that due to the low level of education and the unavailability of data flow (access to concession agreements materials) in these communities, forest communities are often scorned by their own local leadership, the national government, and foreign logging companies. KIs believe that their involvement in these agreements would help to resolve some of the problems that their communities face because they believe that the national government does not usually seek the best for these communities, and neither do the logging companies.

“The local leaders of those communities should be at the table of agreement so that if there are problems, these leaders will address it immediately. The people should make their decisions, but their political leaders should be at the table of discussion. For example, the forestry law of 2006 brought into being two agreements between the government of Liberia and the local people”.

“We the lawmakers of the county are pushing this through the Good Governance Commission. Our people are not benefiting any except the few in leadership (i.e. superintendent, town chief, and the Ministry of Internal Affairs).”

“Communities need to be at the table of discussion and need to deed their forests and all other agreement [sic] mentioned in the MOU between the GoL are not implemented, it would spark conflict.”

This concern is one of the major gaps that this research discovered and seeks to fill in the ongoing forest management initiatives in Liberia. In addition to KIs’ description of the problem, this concern will resurface in the next discussion with participants.

“PROSPER and the FDA are helping, but overall, I still see a gap because these organizations are not relating to us the political leaders of the people. The NGOs and all parties interested in forest management should relate to the political leaders of those communities because we are the ones that keep those communities at peace.”

This informant believes that even though the government agency responsible for forest management and other initiatives by NGOs or action plans such as People, Rules and Organizations Supporting the Protection of Ecosystem Resources (PROSPER) are helping to

promote community forestry, there is still a gap so long as the government officials of those communities are not participating in the social agreements. KIs see this as important because in times of problems, whether between the communities and the government or the concessionaires, the communities most likely look up to them for solutions. One informant believed the national government is helping to create this gap.

“Right now, there have been a lot of complaints, I must admit. Our people are not getting the benefits of their resources. You know, the forest is our resources and it is what we depend on to get roads. I cannot take money from my pocket to build roads as a representative. But the government bypasses us the representatives of the county and goes to the county to make negotiation with the rural people who do not have any formal education to make good decisions about forest resources management. Our people’s ignorance is one of the problems. As a lawmaker of the people, we cannot do much because the agreement is between the superintendent and the community people.”

4.5 Reasonable alternatives of livelihoods

A majority of the KIs believe that even though sustainable forest management is important, it is not a major issue for their communities. It is the international community and the FDA that are pushing communities to protect the forest in an effort to prevent climate change. They believe that in order for this to happen successfully, its partners, NGOs helping to foster community forestry or protecting the ecosystem in Liberia, need to follow up with their programs in these communities and/or provide reasonable alternatives of income generation in these communities. KIs believe that the forest is a major source of income and livelihoods of these communities and taking away or preventing them from farming is changing the natural lifestyle of these communities. The new way of farming, introduced in the new forest law, is not working because our people are not accustomed to it, one KI argued.

“Yes, to some extent. They post problems. Our people farm, and if they are prohibited by concession agreement, it is difficult for them to adjust because this has been their way of life for decades. The newly introduced way of farming is not something that they are accustomed to. Another problem is that people who want to invest in forest management are not investing into their projects at all. This constrains our people a lot. Right now, there is a similar problem going on in one of those communities” [sic].

“If the Communities are not getting the full benefits of the proceeds of the forest, there will always be a challenge. Our communities rely on these resources to survive. Forest is

a major resource for these communities. If the FDA and some of the international partners, especially the Norwegian government, are asking the communities to preserve the forest, what will they eat? There should be a reasonable tip for this to happen. If they don't want logging companies to come here how will the people get jobs? There is an agreement going on now between the community and the FDA and its international partners to keep the forest for six years, I think."

This KI believes that compensating forest communities as a strategy to achieve sustainable forest management is crucial to the success of the present forest management initiatives in the country. KIs did not, however, say exactly how each community or household should be compensated, but they believe that there should be some public benefits such as school, hospital, hand pumps, and good roads build in these communities.

4.6 Loggers are not complying with concession agreements

KIs describe lax regulations as a major source of forest exploitation and disadvantage in their communities. Concessionaires often bribe the government and its law enforcers. KIs feel that the GoL bypasses them as senior officials of the communities and make deals with county officials who then exploit the situation because the communities' local leadership is not educated enough to make good judgments. Our people are disrespected as a result, they argue. Concession agreements are not respected because our people are not represented fully in the process of the agreement. Concessionaires need to also use their kind hearts to create an enabling environment for investment because if they bribe the government, but the communities in which they will operate are not satisfied, that could be a conflict, which could lead to a violent situation. Besides, when these agreements are signed, the government does not do any follow up with these communities to make them fulfill what was promised. The only time the government comes in is when there is a conflict. Investors must take note of this and work to appease the communities in which they work or will work. When the communities come to us with these complaints, we cannot do much because we were not part of the agreements, KIs argue.

"Most especially when the MOU that logging companies signed is not being respected, the office asked me to go in and investigate. As a result of this, a committee was formed in the House of Representatives to address this exploitation that our people face."

“Yes! Sometimes, when the MOU (Memorandum of Understanding or concession agreements) are signed, the logging companies do not follow what they promised, but the government do [sic] nothing about it, especially in terms of job creation. The companies sometimes make promises to employ one to two thousand people, but usually, employ about one hundred to two hundred people. These people are underpaid in most cases.”

KIs were emotional as they described this concern. These KIs feel that their communities are persistently robbed of the resources they depend on and this makes them guilty because as representatives of their people, they should be there for their communities. This is what this informant had to say regarding this:

“The government bypasses us the representatives of the county and goes to the county to make negotiation with the rural people who do not have any formal education to make good decisions about forest resources management. Our people’s ignorance is one of the problems. As a lawmaker of the people, we cannot do much because the agreement is between the superintendent and the community people.”

“The concession agreement is signed between the logging companies and the national government without the communities’ input. In this agreement, everything is agreed upon and it is the crucial part of the contract, but the communities are not involve. The MOU, however, is when the communities are invited, but the MOU is not the real contract. It is an overview of the real concession contract which has already been signed. This is where I see a conflict of interest. And this is why it is not always respected by concessionaires” [sic].

KIs see this as a major problem in the present initiatives to decentralize forest management and express their disappointments about how the national government and logging companies are treating their forest communities. This concern will resurface in the next section of the discussion.

Chapter 5: Results/Story: Semi-Structured Interviews

5.1 Bad Governance-No development

In addition to KIs' concerns about bad governance being a major problem of forest communities' sufferings, all participants from the four villages/towns raised this issue as a persistent problem. These participants believe that the national government connives with logging companies and as a result, concessionaires do not live up to the social agreement in terms of employing communities' dwellers, building roads, schools, hospitals, and other projects as measured in the contracts. Participants were very enthusiastic as they raised their concerns. In fact, when it came to this part of the question, they impatiently interrupted the person being interviewed as if it were a focus group interview or discussion. These participants believe nothing much has changed from the past to the present, in terms of how their communities have been robbed of the forest resources they depend on for survival and livelihoods. They recognized and appreciated the present government's initiatives to include communities in forest management, but criticized that barriers still existed. One of these barriers is the Community Forestry Development Committee (CFDC). Participants in all of the interviews talked about the corrupt practices of this body and recommended that it be dissolved because its members were not legitimately elected and that CFDC is not a true representative of their communities. They also talked how their forests and its resources were exploited during the fourteen-year civil war as a result of bad governance.

This is what one participant had to say when asked whether logging activities in their community were helping the community in any way:

“No. The government created some kind of umbrella that we cannot see through, the CFDC (the Community Forest Development Committee). Now, the CFDC that they formed have somebody who and them [sic] will share our benefits. The head of this committee is Anne Morris, this is why we asked for a school, but the school that they built was a fraud. We do not know how much the schoolhouse cost. They refused to give us a breakdown.”

When asked as to whether or not the forest in the community was affected by the civil war, one participant said:

“Yes! For example, one other logging company (MGC) during the days of Charles Taylor, they come here and cut our logs without informing the communities.”

Researcher: Oh, one of my participants mentioned this company in his interview.

“Yes. We were victimized. For example, MGC a logging company, under the leadership of Taylor, cultivated our forest; even the virgin trees were cut, especially the tree that we use for oil. Most of the logs were abandoned and it was a waste. It really hurt us because we watched our trees get rotten before us. At least if it was exported and sold to bring some income to the Liberian government it would have been better.”

Participants raised these concerns with angry emotions and often blamed their CFDC members as being one of the contributors of their plight. One interesting thing about these statements is that Jaine Mills is one of their CFDC heads. Mills’ secretary refused the request that the researcher interviews them at their residence in Zedrew. The secretary also insisted that they wanted to follow the researcher to the affected communities, but the researcher refused the offer.

This is what these participants had to say in regards to the question asking whether or not the forest in their community was affected by the civil war:

“Yes, it was affected, especially by some logging companies that did not pay nothing or have any regard for the community. That time there was no law to say talk to the community before you begin logging operations. The community had no rights. If you talk against anything you were in trouble. The logging company had armed men assigned to them by the government of Charles Taylor to protect them and every time we talked, they threatened us that Charles Taylor sent them. There were even logs abandoned here. Our voice was nothing.”

“During the wartime, we were not even told anything or get any share. Before then, when it comes to the forest, our people were not told, but today, there are some changes, no violence, we can sit with the FDA and express our disagreement and it is redressed to some extent. If we agree, FDA agrees. If we disagree, FDA also disagree [sic].”

“During the war, logs were taken for free and the community was left undeveloped. There were always soldiers assigned by the government to keep watch over the logging companies. We did not have any voice. Today, there are some changes. No one can just come and take our logs. We are told before people enter our forest.”

These participants’ concerns demonstrate how the past and present governments’ logging operations affected their communities. Many appreciate the present forest management initiatives, but they still believe that nothing much has changed.

5.2 Watchdogs of the Forest we can manage it better

Many, if not, all participants, including their KIs talked about their natural ownership of the forests, not its resources. This concern is not only common in the forest communities in Liberia; it is a common issue for forest communities in the tropics, especially when it comes to forest concession deals. Colfer and Byron (2001) argues that there is no such thing as a virgin forest when it comes to indigenous populations. These authors argue that forest concessions that do not respect the values and conservation practices of local people are often a problem among state, local, and loggers. These participants believe that as natural participants of the forest, they know the importance and are capable of protecting its resources from concessionaires and illegal exploitation provided the GoL gives them some form of local authority. Some, however, acknowledged the present efforts to achieving SFM, but argued that more is needed.

This is what one participant had to say when asked: what do you think needs to be done in order for your community and the national government of Liberia to benefit from the forest resources or protect them:

“I think the FDA should empower the community people to protect the forest because they have the capacity to train people to do so. But the government should also train our community member to help in the process. For example, if there are any illegal activities going and the community intervenes, the companies will not respect our authority if we do not have the backing of the government. So collaboration is better.”

“If the book people say that we do not know the importance of the forest, we will tell them to leave us alone because we live here and know what is best.”

“I do not think so, because the very logging companies that exploit our forest whenever we try to point those things out, the logging companies will say that the government is in our pocket. But the community and the government need to work together so that whenever we see anything that is not right we can report it to the government and the government will support us.”

These participants were responding to the question that some educated people often argue that rural people do not know that maintaining forest is important to their health and the health of the environment. Participants' use of “book people” was a common way they referred to the national government and its international partners.

“If they say so, that is false. We can manage the forest by ourselves. We make good use of the forest. We are the custodians of the forest, so we can manage the forest. We can still manage it without the government’s intervention.”

This participant believes that forest communities can take good care of the forests with or without government’s help. This participant was confident that communities could rely on existing traditional knowledge and local authorities to protect forest resources. Many shared this perspective.

“I have a problem with them if they say so because we are capable of taking good care of the forest.”

“The educated people’s idea is better, but because of some conditions, the rural people turned their back on it. For example, the rural people cannot afford to use the young forest to make their farms because it requires more weeding of grass so they use the old forest. They have to eat because there is no support from the national government if they don’t make farms.”

“I know that we take care of it. We can better take care of the forest because we live here and anything that will happen we can inform the government about it.”

“Um, I disagree because the government is not replanting the trees that are being cut. In the forestry law, if you cut a log you have to replant. If you think you can take care of the forest you should make sure that the companies replant the trees. The government is not doing well.”

These views raised similar concerns about the national government’s inability to manage forest resources and/or hold logging companies accountable for not abiding by concession agreements. Locals feel that, with a little help from the national government, they can be a better keeper of the forest. Below is what participants had to say about this:

“No. Hahaha, hahaha, I live in the forest so I know it best. If they say that they are going to manage the forest that would not be benefiting us. It is impossible. I live in the forest, but it is owned by the government, but we take care of it. We are the government.”

“That is not true. If we did not have an idea of how to protect the forest resources, we will not have elected those committee members that I told you about. In addition, since the country was founded, our forefathers have lived here and protected the forests. They could have misused it, but they did not. We have known about the forest and we know how to protect it. We are still maintaining it for future generation. We have known about the forest since the days of our forefathers.”

“We are the main keeper of the forest. Know how it goes and how it comes. Our ancestors did not know book, but they managed the forest. We are the main people that can take good care of it. Our ancestors took good care of the forest even though they were not educated.”

These participants are expressing their frustrations that everyone, including the national government, claims that rural people know not the importance of the forests they inherited from their ancestors and have lived adjacent to it for decades. The interesting thing about their stories is that they never admitted to owning the resources of the forests, but argue that they are the watchdogs of the forests even though the forests belong to the national government, by law.

“To manage this forest, it is the government, but we are the watchdog [sic]. We cannot bring any companies to exploit our forests, but the government can, so I believe the government and our community need to work together.”

5.3 Breaking Promises

Participants expressed concerns about logging companies disrespecting their values and traditions, especially during the civil war. Today, they believe even though they are aware of logging concessions in their communities, the benefit is little or nothing because these companies often bribed the government and its regulating field agents who are supposed to make sure that these companies fulfill the concession agreement. As a result, our communities are left undeveloped and poor, they say. They also raised concerns that concessionaires often stated that the government is in our pockets, so your voice does not matter. These concerns were raised with intense emotions.

“The logging companies always say that the government is in our pockets whenever we talk about the bad things that they do. I want for this to stop. So there should be some understanding to erase this notion.”

“It is said, but it has not happened. You know a poor man does not complain. The government said that for every one cubic meter of a log that is felt, the community gets \$1.50 as a share. This is not happening.”

“In regards to the question that you just asked, if I will grade the logging company here very poor. Some of the agreements that we just signed, we agreed that the community will play its role and the logging company, in return, will play its role. But they are not respecting that. They are not doing nothing at all. They make promises that they cannot fulfill, so their operations in the community are very poor. Some of the things in the social agreement are not being adhered to.”

Participants admitted that the government is also contributing to this because they are not getting their share of the social agreement. As for the logging companies, participants believe

they show no regard for these agreements because of the bribes they pay to the national government and the freedom of no accountability they enjoy as a result.

“That logging activity is not helping us. Echo, nothing they are doing here. The way forward now, is that as you know, in the Forest Management Contract, we told the logging company to change their area of operation every five years, but they are not doing it. From 2010, the company started operations, but we the people in the community are not feeling nothing!” [sic].

“We do not know whether company here or company not here—we are not feeling nothing! In addition, we also stated in the social contract that when it comes to employment, the affected communities’ people should be employed first. Now that is not being done, look at our roads. I don’t even know if there is a logging company here, an old lady from the community intercepted [sic].”

5.4 Direct representation/including our Government Reps.

Many participants raised concerns that the CFDC is not representing their interests and as such, they need direct representation and that their elected government officials need to be part of the logging concession agreement in order to assist them in making key decisions. These participants believed that these representatives would seek their interest and guide them through the negotiation process. This could be a good remedy to their problem, given the low level of education in these forest communities. In many cases, participants believed that as they seek direct representation in all of the processes of logging concessions, their direct representation, and with their government officials onboard, would make a difference.

“Um, thank you very much. What I really want to say is that, the government, even though the government is doing well, the community needs to be part of that their committee that they set up. A direct representative from our town needs to be part of the MOU and the social contract agreement. This is the only way that transparency will occur. We were not in town when the head of the CFDC was chosen. We therefore asked for reelection, but R. Mark told us that the logging people did not have money to train new people.”

“The CFDC’s officials are not working in our interest. The government needs to allow us to be on that committee that they set up. The community does not have any representation. For example, based on the new forestry law, the community gets some number of cubic feet of the total logs cut, but we have no direct representative to report an accurate figure or count the cubic feet of log that the logging companies cut. We are paid based on cubic feet, but how do we know if we have no one on the committee.”

“Our heads lie to us that the logging company did not have enough money to train us. These committee heads don’t even have an official office that we can take our complaints.”

Still, these participants expressed their views about the past and present management and how the benefits they received or are receiving differed. One talked about the present initiatives to get communities involved in the management process, but pointed out that it would be a good idea because logging companies bring job opportunities to the communities.

“The heads of this committee (the CFDC) are not representing us. This is another block for us. They eclipse us. We want to be at the table of agreement ourselves. If our government representatives can be there too, that will be fine. We want to hear the next question!”

“Um, thank you very much. What we want for the government to do is that when you working with a community, let the community know what is going on in the agreement. The community needs to be part of the concession agreements, the social contract, and the MOU. Full participation of our own people is what we need. Even though they are working with us, we want to be at the table of discussion. If we are involved, we will help to enforce rules and force the logging companies to abide by them. In short, a collaborative management, including our government officials, will work for everyone” [sic].

Forest communities are once again expressing the level of participation they get in concession agreements. These interviews were, in most cases, respectfully interrupted by resounding voices of community dwellers as they alluded to the main interviewee’s response to the question (Do you think the logging activities in your community are helping the community in any way? If not, what do you think should be done in order for your community to benefit from logging activities?). The following is what participants had to say regarding this:

“The CFDC needs to inform us about all the agreements they make with the companies. Our representatives need to also be part of the process so they can relate to us properly so that we are educated about what is going on with the social agreements. MOU should be enforced by the FDA and the Government so that we can get our share of the concession contract.”

“We are not benefiting from anything, except the farm that we make. It is even making our children not to go to school because there are no jobs for them to work besides farming and cash crops planting that we do, we are not getting any benefits. We need to be fully involved and call the heads and call a meeting for the development business so that, at least, everyone will be aware of logging activities.”

These participants raised another issue about information dissemination so that members of the communities are aware of forest contracts. These participants also believed that with their government representatives onboard, the CFDC's officials would better relate to the communities about the issues at hand.

5.5 Lax regulations are killing us

When asked about whether or not logging activities in the communities are helping in any way, participants expressed lax regulations and corruption as being the major concerns. This is especially true in Third World countries. In the case of Liberia, these participants believe, along with the KIs, that it is broad because concessionaires tell them in the face "we have the government in our pockets." Another issue that was raised about lax regulations was that participants believe FDA's field agents, who in most cases are the regulatory arm of the government, often received bribes from the logging companies. These were wide perceptions shared by most participants. There was no evidence for these claims, except some of the stories relating to the unfinished projects in these communities. This is what one participant had to say about this:

"The main point is that, I want the government and us to understand. The logging companies take contracts to build roads or pumps for us, but do little or nothing, but there is no check and balance. We need to collaborate with the government in protecting our forest or through our political leaders (government representatives) because our representatives know what is good for us."

When asked about how their forests were affected during and after the civil war, these participants expressed their concerns about how they were and are victimized by logging activities in their communities, especially during the regime of former President Charles Taylor. They talked about how these logging companies cut little trees that were below the required diameter at breast height (dbh) and how government militants that were meant to enforce forestry laws and regulations were used to protect these companies, instead.

"My recommendation is that we need the FDA to help us because there are some people or company fishing on the water without the community's consent. We need to stop that. Because we, the community, if anything happen, it will be our blame. Also, for the

logging, there are some logs that they cut without replanting. These trees are helping to protect our land and our houses from storms and erosions. This is not fair; the government needs to do something about it. The loggers need to replant the tree whenever they cut down them.”

Participants acknowledged that they have limited power when it comes to enforcement; they called on the FDA and the government to help them. These participants also raised concerns that loggers need to be held accountable for reforestation, while others raised concerns about excessive fishing by some foreign fishermen who did not get the communities' consent.

“My question is that will you tell the government our problems. The reason why I asked that question is that the companies always say they are paying taxes to the government so they can do whatever they want, but we have no roads and no development, so our government is killing us. How can we talk, we don't know book.”

“We don't know book” is a common adage local people used to refer to people who do not have formal education. These participants believed that part of their problem is due to their low level of education. This was a common belief among many participants. Some also believe that underpaid government employees who are responsible for enforcing forestry regulations is a contributing factor. This is what one participant had to say:

“This problem happens because the company always bribes the government workers who are in charge of regulations. When this happens the logging companies show us no respect. The companies don't even listen to us or respect the agreement anymore. It needs to stop.”

Some participants also doubt as to whether or not the government will take action if the communities report any violation of the logging concession.

“The question that I want to ask is that, we the CFDC people, if we really report any violations to the government, will the government really take action? Does the government really enforce regulations whenever any illegal exploitation is reported, especially by the CFDC committee members.”

5.6 Our survival & Livelihoods depend on the forests

Most participants, if not all, talked about how the forest is their only source of income and livelihoods. Almost every participant noted that conservation is good, but the government and the NGOs that are involved in conservation initiatives need to provide reasonable alternatives for income and food. Participants overwhelmingly believe that they are aware of conservation, at

least in the traditional sense, for generations. This is simply done when communities use a particular forest for slash-and-burn farming that part of the forest is left alone for some years before it is used again. This is a typical pattern of farming in the tropics. Besides subsistent farming, participants talked about other benefits those non-timber products that they get from the forests. Some of these benefits include, but are not limited to, traditional medicine, woods, rattans, raffles for construction, planks, and local furniture and musical instruments. Other basic needs that participants said the forests fulfill were nutrition, protein, and fresh drinking water. These concerns were based on the question: Besides logging activities, what are other benefits that the forests bring to your community?

“We make farms. That farm can make us happy because we are not working. We get our food and other household materials. Clean water and air are some of those benefits.”

“Yeah, from the forest, we benefit from it in a sense that the materials are used for building. We also use the forest to make furniture, get food, and fresh drinking water.”

“As for me, I can get benefit from the forest through the rubber and cocoa that I am planting. As for me, I benefit by making farming. We also get food too.”

This participant believed that the government needs to communicate with the communities prior to sending concessionaires into the forest because it is their natural right to use the forest for farming. In addition, this is what other participants had to say regarding the question:

“We that are doing farming are benefiting from it. We use our natural strength. We know our rights so the governments need to ask us before doing anything.”

“Some people are good at using the wood of the forest for furniture and construction purposes. For example, we have people here the fix tata chairs for sale. It helps them to get income. We get shelter, zinc for our roof, food, fresher water, fish, medicine, and protein from the forest. We do not even know whether there are logging companies here.”

“We get furniture, food, fruits, medicines and we also use it to build our houses.”

Despite all of these participants' concerns that they get some benefits from the forest, they expressed how labor-intensive it is. They believed that hunting, cutting down the forest to make farms, fishing, and using local trees to build their houses are the only means of survival.

In a nutshell, the researcher learned that the new initiatives of forest management in Liberia focus specifically on the creation of new forest policies, but expressed little or no interest

in the implementation of the forest law, especially holding logging concessionaires accountable, direct involvement of rural communities' leaders, and constant updates to determine whether these initiatives are succeeding with periodic checks on forest communities to know whether they are actually benefiting from these decentralization initiatives. Other problems include weak implementation of the present forestry laws of 2006 and the Community Rights Laws (CRL) of 2009; inadequate support and funding to the FDA, EPA, and civil society organizations, and forest proceeds are not trickling down to the forest communities due to unfulfilled promises by loggers. As a result, forest communities feel threatened that their traditional way of life is taken away from them. Twalley (2014) also confirms this when the author wrote that implementing the 2006 forest laws and the CRL of Liberia has been a major obstacle for the national government. This study is designed to overcome this problem with a collaborative management approach of forest resource management, based on the views of affected forest communities in Grand Gedeh County. This collaborative approach supports the direct involvement of local people in the development and management of their forest resources, promoting local governance, increasing the forest sector revenue for national development, achieving sustainable forest management, and avoiding further conflict over natural wealth, based on the perception that unequal distribution of forest and other resources proceeds breeds conflict. No research methodology could reveal these concerns better than Grounded Theory. This is why this theory is so important to this research.

Chapter 6: DISCUSSION

This chapter discusses the interview results of the study and states what it means to the communities, the government of Liberia, and other NGOs working in partnership with the GoL to ensure sustainable forest management and community participation in the process. Data collected from both KIs and participants are also discussed and analyzed with a descriptive reference to the themes. Some of the things that the researcher learned from the interviews are also presented in this chapter, for instance, lax regulations, weak national government, poor management, no development, among others. Information from KIs' interviews was helpful in leading to the next step of the study. One of the interesting things about the analysis is that both KIs and participants raised concerns about the same issues during the interviews, and even though both interview transcripts were analyzed separately, the researcher found that the themes created for KIs matched exactly those of the participants. This means that the themes used in this discussion are based on the unifying and consistent voices of these two distinct sample populations (KIs & Participants). Implications of the results and limitations of the research will be discussed during the analysis in reference to previous studies, and suggestions will be made for further research. A demonstration of the present initiatives to include communities in forest management will be portrayed, and recommendations, based on field data and observation, will be made at the end.

6.1 Discussion of the Population Data

Even though the goal of this study was not to rely on generalizability, it is worth mentioning this sample of affected forest communities could be compared with forest communities across Liberia. The population or sample provides a better understanding of the conditions that forest communities face within the Southeastern region of Liberia, based on the geographical location of the study area. The diversity of the population relies on the fact that intermarriages and local migration are encouraged in the region. The education level of participants, including their awareness of the study topic, is similar to any forest communities in the country. Besides KIs, participants were high school graduates, high school dropouts or never attended high school or college. Since there was no information collected or available on participants' education level,

this claim is based on the researcher's observation of the population. These might be relevant to future research because it is important the complete demographics of these communities. Future research should also consider gathering data on participants' income and expenses, especially prior to logging companies' arrival in those communities. It would also be helpful to know existing government's/and or NGOs' projects within these communities, prior to any logging activities, in order to determine the effectiveness of the contribution to development that concessions bring to the communities. This would help to avoid confusion and obtain more accurate data about what projects were undertaken by the GoL, NGOs, and logging companies.

6.2 Theme 1: Bad Governance-No development

The qualitative data of this study was essential in identifying some of the complicated issues that forest communities had about logging operations and bad governance and how these two groups affected their communities. The results of this study, in this regard, were similar to the findings of other studies and are consistent with the overall ideas that other authors have pointed out about the plight of forest communities in Liberia, Sub-Saharan Africa, and the tropics. Laurence et al. (2011), for example, reveal how logging contributes to deforestation, violation of local people's rights, corruption in the forest sector, and environmental degradation as a result of logging operations. A perfect example of this claim is when the government of Papua New Guinea took the alarming step of stripping local communities of the key land-rights protections, preventing them from suing any offending corporation for past or anticipated environmental damage (2011). In addition to the concerns of KIs and participants that the national government is a major contributor to their problem, the author of "Can Liberia's forest economy benefit the poor?" argues that political elites and foreign logging companies, including commodities traders, largely profit from the proceeds of natural wealth while the majority of the whole population is left financially poor (Jarrett, 2015). This is exactly the views that many, if not, all participants hold, including KIs. This is what one the participants had to say when asked: Do you think rural communities should have decision-making opportunities about forest resource management?

“That is why the MOU is always violated because it is a subset of the concession agreement. So, the government sometimes creates all of these problems.”

In addressing the conflict that arises among the government, loggers, and forest communities, Colver & Byron (2001) raise issues about forest management in Central African countries. The authors argue that forest management in these countries did not consider rural communities' knowledge about management or their customary laws. Also, forest concessions were given in areas without taking into consideration the views of local people. However, the authors' findings show that by customary laws, the land belongs to rural communities and cannot be alienated. This often triggers the problems among the state, loggers, and the communities. These concerns are no different from the ones expressed by participants in this study.

The authors also noted that there is no such thing as a virgin forest on the situation of indigenous populations (Colfer & Byron, 2001, p. 216). This argument is based on the fact that luxuriance of the equatorial vegetation, which often attracts western travelers, makes people forget that those forests were passed down to families millions of years ago, but this new generation of owners are persistently not consulted regarding the fate of their forests. However, the reality remains that forest-dependent populations, especially those in the tropics, are not consulted either when their lands are allocated to a logging company or designated as protected areas (Colfer & Byron, p. 216). This concept gives the researcher a better understanding of his research. This idea of bad governance is uniquely important to the achievement of sustainable forest management, the communities believed.

For the national government of Liberia, these concerns are worth taking seriously as they work to ensure SFM and community participation in forest management. Many participants believe in the government as a major game changer in the way in which forest resources are exploited from their communities and how loggers took advantage of these communities. Participants and KIs also believed that the national government's reluctance to enforce forest regulations and/or laws is another major factor that gives logging companies the freedom to exploit forest resources and forest communities. These participants strongly believed that loggers

are proud of the bribes they pay to the government in exchange for the freedom to exploit and not fulfill the social agreements. Participants believed that until these issues are eradicated, their communities would remain undeveloped and never benefit from the resources they inherit from their land. These concerns are common in forest communities in Sub-Saharan African countries and communities in the tropics. Colfer and Byron (2001) raise this issue when a logging company manager attempted to bribe a forest community whose land was logged and as a result, the community's forest was left with no building materials, a place to hunt, and fouled water sources, which eventually led to declining fish populations. The company offered US \$3,500.00 to the community's leaders for the cutting of logs. The community's leaders refused and notified the district officer to inform the loggers about their refusal. With the help of the community's own lawmaker, the community was able to protect its forest. The government of Liberia can learn from this example to strengthen the present decentralization forest policies, in order to ensure that rural communities and the country as a whole protect, benefit, and sustainably use forest resources.

Results from this study show that the communities see bad governance as a disadvantage to the development and progress of their communities. This was expressed in all of the interviews conducted. The belief that the national government is the source of the problem was strong. These participants see the logging concessionaires as strangers, blamed the government for the unlimited powers that these concessionaires exercised over the communities and members of the communities that work for the companies. Some of the frustrations were expressed about the corrupt practices of the CFDC, a committee that represents the affected forest communities in negotiations related to forest matters. Both KIs and participants expressed these concerns with strong emotions. These problems are not only common in Liberia. For example, the Kofi Annan's Africa Progress Panel has long advocated for the better management of Africa's natural wealth, in order to drive dynamic and inclusive growth. In 2013, the major issue that the panel raised was equity in the extractive industry, and in 2014, grain, fish, money, highlighted the paradox of

poverty amid plenty within the forestry sector, Jarrett writes (2015). The issue of participants accusing the other partners of not working with them or representing their interests is revealed in a comprehensive study conducted in forest communities in Cameroon, Indonesia, and Brazil. Colfer and her colleague found that participants complained that other partners were not considering them in the management of natural resources even though loggers formed administrative units in charge of relations and the communities formed a committee, which was headed by local administrators and traditional authorities. The communities felt that the committee was not representing their interests (Colfer & Byron, 2001). Results from this study certainly also fit in with the above-mentioned scenario and findings. These are serious issues that participants have with the GoL's present new initiatives in forest management, and locals seem to have a possible remedy to the problem. This remedy will be discussed in the following themes.

6.3 Theme 2: Watchdogs of the Forest we can manage it better

Both KIs and participants strongly believe that as the natural inhabitants of the forest and forestland, forest communities have some advantages in terms of protection, conservation, benefits, and management of the forest. This natural right to forestlands, however, did not contradict that the national government's input is needed. On an overwhelming scale, both KIs and participants concealed that government's help is needed in order to fully manage the forests and its resources from all forms of exploitations. These communities believe that their forests have long been properly managed since their ancestors' days, so they are aware of sustainability. We know that we are supposed to keep the forest for future generations to benefit, they argue. This is one participant's response in regards as to whether or not rural communities are capable of managing forests:

"We are the keeper of the forest. We are the main people that can take good care of it. Our ancestors took good care of the forest even though they were not educated."

In addition to these claims, several authors and studies are increasingly recognizing the management capabilities of rural communities. Chapter nine of *People Managing Forests: The Links between Human Well-being and Sustainability* referenced other scholars who recognize the

management capabilities of local people. Some of those scholars were Joiris (1996), who claimed that given that ecosystem biodiversity in protected areas did not undergo significant degradation due to local economies, such populations should be regarded as possessors of a certain know-how about the rational use of the forest ecosystems, and Princet (1994), who also re-echoed that for the past decades, the knowledge of local populations had been unknown to or ignored by almost all scientists who instead taught and disseminated their own truths as being universal (Colfer & Byron, p. 217). The issue of natural ownership was raised as a serious concern participants raised and must be taken seriously by all actors involved in SFM in Liberia.

Many participants see the issues of natural ownership to forestlands as important because the forest is the main source of life and livelihoods in these communities. Part of this, the communities believe, is the government's lack of interest in the development and economy of their communities. Amanor (2003), for example, confirms that some trees in the West African forest are used by local people for carving canoes, mortars, culinary tools, and furniture, while others bear fruits that provide important food and condiments. The author argues that there are others trees that are used for medicine, chewing sticks for dental cleaning and sponges, and other non-timber food products are sold in urban markets (2003). This local use of forest is embedded in traditional ways of life for these participants. A recent study conducted on Liberian forests shows that timber in Liberia is an economic source for the country, but it is spread across the rural parts of the country, which makes it an important element of diffusion among the general population (Lamb, Moore, Smith, et al., 2009).

The issue of land tenure is another important issue that participants raised even though the present initiatives to decentralize forest management introduced the Community Rights Law. This law provides nine steps that give forest communities the opportunity to apply to the FDA with a nonrefundable fee of US \$250.00 before they can own a portion of the forestland. This gives rise to the community forestry initiatives in Liberia (FDA, 2016). Despite this effort, participants and their KIs still express their dissatisfactions when it comes to land tenure. Other

researchers found this as a major problem. At present, Brottem and Unrum (2009) believe that the root cause of land tenure in Liberia is a result of the massive confusion that exists on a range of legal, administrative, boundary, claim, and ownership issues. The confusion about which laws apply to whom and where, multiple changes in subnational boundaries and definitions and roles of administrative area, chiefdoms claiming a large portion of lands simultaneously, state, private interest, and informal group are all examples of land tenure in Liberia that are worth considering. Lamb et al. (2009) also confirms the rural people in Liberia have been living adjacent to or within the forest for many decades, since the existence of the country, but most importantly, they rely on the forests and other natural resources for their livelihoods, cultural traditions, medicine, and for subsistence farming. Collen et al. (2011) also validated this when they wrote about the experience of Fauna & Flora International's mission to undertake a new project at the newly Lake Piso Multiple Use Reserve in Liberia to investigate the cultural connections between people and nature. During this investigation, the authors visited four villages of the Vai and Gola tribes of Liberia. Collen and his colleagues' discovery is no different from what other scholars had found. Their findings reveal that participants use their forest for ritual practices, cultural training, protecting against storm and erosion, and noted that the certain clan had a special relationship with the nine crocodiles. Kideghesho and Mtoni (2008) also provided a similar story, which talked about how local communities around Serengeti National Park in Tanzania had historical and cultural relationships with resources in their area. The authors believe that, to a large extent, those relationships were interrupted by conventional conservation models supported by exclusive punitive policies.

The findings that rural communities have a vast interest in the forest for many reasons is a good tool that any government could use to revisit its policy on sustainable forest management, that would include traditional authorities and other stakeholders as significant partners in the management process. In the case of Liberia, the national government could use these concerns to reevaluate some of the provisions of the 2006 forestry reform laws and work on the capacity

building of the FDA and its employees. This concern is crucial to the sustenance of the present initiatives on sustainable forest management in the country.

6.4 Theme 3: Breaking promises

Participants and KIs identified a number of barriers in the past and present logging concessions, providing practical insights into the nature of the problem and how it could be resolved. The first barrier that participants identified was that the government and other local officials in the county accept bribes from concessionaires. Participants believe that the government encourages loggers to take advantage of their forest, not to mention the unlawful exploitation of timbers. Many participants refused to identify concession companies as the contributors to their problem because these participants argued that logging companies are strangers. “They did not go into our forests or communities without the government’s consent,” participants said. They believed that it is illogical to hold the messenger responsible. Messenger, in this case, refers to the logging companies. Several of the barriers experienced by forest communities in this study were similar to those experienced by forest communities Sub-Saharan Africa and in the tropics. The second concern was the issue of government’s reluctance to enforce forestry laws/regulations, which these participants believe is due to the bribes that these companies paid during the initial stages of the concession contracts. The final concern was about the how past governments, especially during the fourteen-year civil war, supported logging companies even though these companies were not operating according to the forestry laws/ regulations. These concerns were related to when others do not follow the rules. Participants believe that both the government and logging companies were not fulfilling the social agreement responsibilities. In this case, it is the Memorandum of Understanding (MOU). These concerns are very common to what other studies have found in forest communities in Sub-Saharan Africa and the tropics. Colfer and Byron (2001) tells the following story from a village in Indonesia about when others do not follow the rules:

The people of Danau Seluang told of an incident that took place in 1982-1983. .⁶ This incident may, of course, differ across forest communities in Liberia. The concept, however, is likely to happen if communities reach their peak of patience, due to how they felt about gross exploitations they suffered from different interest groups as a result of lax regulations and corruption on the part of the GoL and local officials in the county.

The fact that all participants discussed that loggers were not living up to concession agreements because of the bribes they paid to the national government officials and some local officials in exchange for the freedom to exploit forest resources as a common barrier is consistent with other findings. Jarrett (2015) reveals that permits intended to benefit small-scale landholders were abused by large logging companies that ignored laws and dodged taxes. Income from the sector, therefore, dropped drastically and fell short of expectations, the author argues. Laurence et al. (2011) reveal how logging contributes to deforestation, violation of local people's rights, corruption in the forest sector, and environmental degradation. By the same token, the government of Papua New Guinea took the alarming step of stripping local communities of the key land-rights protections, preventing them from suing an offending corporation for past or anticipated environmental damage. This is what one KI had to say in regards to this concern:

“The MOU is just an overview of the legal agreement that was already signed. That is why the MOU is always violated because it is a subset of the concession agreement. So, the government sometimes creates all of these problems. But the investors too need to be considerate to create an enabling environment to invest. Concessionaires need to build a good rapport with the communities in order to avoid violence should anything happens in the future.

⁶ An Iban community living upriver from Danau Seluang used tuba, an illegal fish poison, in a river that drained into the nearby lake. Eleven times the people of Danau Seluan caught them and reported the incident to the Fisheries Department. Eleven times, nothing was done. After the twelfth time, the people of Danau Selaung decided to use tuba themselves, as a form of protest. Although 250 individuals from the community were taken to jail, they succeeded in making their point and were soon released. The use of tuba by the Iban people was not a problem for some time after that (Colfer & Byron, 2001).

Similarly, the government of Liberia could use these concerns as an opportunity to work with communities and traditional leaders within the communities in order to ensure that the 2006 forestry reform laws are actually working for all parties. These concerns could also help the GoL and its international and local partners to modify some of the chapters or the provisions of the new forestry reform laws as well as the Regulations to the Community Rights Law of 2009. These concerns could mean a lot of things to the government, depending on how serious the present initiatives to decentralize forest and other natural resources and involving rural communities in the process is to the national agenda. The government could also use the information provided in this study to conduct an effective assessment of the new initiatives to test its strengths and weaknesses in forest communities all over the country. These concerns could also set the footprint for a new approach to sustainable forest management that would meet the needs of human wellbeing, forest wealth and sustainable use by all primary users, and one that would benefit all interested parties, including forest communities.

In addition, these concerns could help the government to ensure that forestry regulators are sincerely performing their duties. That means ensuring that logging companies follow the regulations and/or laws, respect local labor and the traditions and customs of the communities in which they operate. This was an important concern that most participants raised with strong emotions. Several studies validated these concerns, based on comprehensive data from tropical rainforest management and the role of national governments in achieving sustainable forest management in developing countries. Studies by Mahanty et al. (2009) and Bruenig (1996), demonstrate a perfect example of this when the authors wrote that the most difficult approach that tropical rainforest managers face is the assessment of the present value of losses of future increment and yield, which is caused by overuse, misuse and mismanagement. In addition, Mahanty et al. (2009) also believe that as a result, the collaborative approach of forest resource management has drawn the attention of many countries in Asia and the rest of the world, especially in recent years.

6.5 Theme 4: *Our survival & livelihoods depend on the forests*

Another interesting concern that participants and KIs raised was the issue of how communities rely on the forests for a variety of things, including food and livelihoods. This view is consistent with the history of forest communities in Liberia and recent studies confirm that it is common in forest communities in the tropics. Lamb et al. (2009), which describe how rural communities use the forests and what the forest meant to them is a good source that relates to this concern. Kittredge (2004) provides good examples of how forest communities in the U.S. use their forests and/or lands. Another concern that participants expressed about this theme was logging operations contribute to the destruction of their forests and the disruption of their normal ways of life and cultivation practices. These participants believe they are aware of conservation practices because they inherited that from their ancestors. Colfer and Byron (2001) shows that forest-dependent communities are practically perceived to be the most important actors in sustainable forest management. This perception was not only shared by participants in the study area, but also by government officials, traders, and timber company employees. This what some participants pointed out in relation to this:

“Some people are good at using the wood of the forest for furniture and construction purposes. We get shelter, zinc for our roof, food, fresher water, fish, medicine, and protein from the forest. We do not even whether there are logging companies her”.

“We just make our farm. We also depend on the forest for food, water, and other farming activities. If the logging companies cut down the trees, the communities will be vulnerable to storm”.

This concern was very important to KIs and participants who believe that rural communities had no means of survival except the use of forestlands they inherited from their ancestors to farm and meet their basic needs. Thiam (2000), addition, reveals the multiple uses of forest in French West Africa by forest-dependent communities. The interesting part of these studies is that none of them contradict the concerns that forest communities raised in the study area. Colfer and Byron (2001) and Amanor (2003) also validate these concerns from other forest-dependent communities in the tropics in their study, *From Participation to Rights and*

Responsibility in Forest Management. For example, the authors wrote that forest-dependent communities in the tropics used their forest for a variety of things, including food and livelihoods, building homes and roads, medicine, carving canoes, and mortars.

The significance of these concerns could benefit the national government and its international and local partners in making the necessary adjustments to meet the basic needs of forest communities as the country gears towards a sustainable management of forests and related natural resources. This concern is crucial for the success of any forest management initiatives in the region and the country as a whole, especially when studies showed that sustainability would seem more likely to exist in a context where local stakeholders consider it desirable (Colfer & Byron, 2001). Since the issue of survival and livelihoods is as important as sustainability to these communities, which is proven to be prevalent in forest communities in the tropics, the GoL and its partners could use these concerns to provide reasonable alternatives for income generation in these communities.

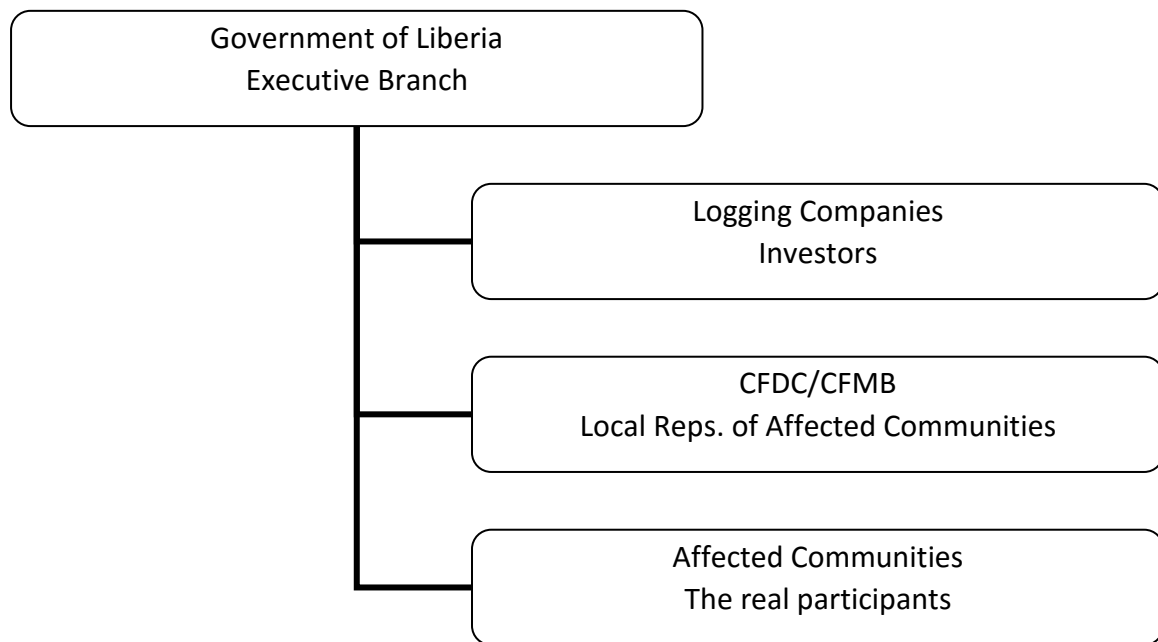
6.6 Theme 5: Direct representation including our government reps.

The concerns of many, if not all, participants, including KIs, expressed the need for direct representation during the initial stages of concessions agreement is crucial. Participants believe that because they are not directly involved in discussions leading to logging concession contracts, there is always a foul play. They perceived this as the beginning of corruption. Direct participation, including their government officials onboard, was another serious concern that participants raised. Other studies also show that participation of rural people is essential to sustainable forest management. Colfer and Byron (2001), for example, argue that participation is a process through which stakeholders influence and share development initiatives. The authors focus on structured informal interviews that focus on four proposed functions of participation: reducing noncompliance of various stakeholders with regulations by local monitoring, reducing conflict about forest management or converting it to a mutual accommodation, contributing indigenous knowledge of forest management, and controlling the speed and direction of social change. The authors believe that participation is important to sustainable forest management and

that rural people have a culture that encourages it. Other authors also validated that participation in forest management is a major component of SFM. The story of Wong Garai community, which was expressed in (Colfer and Byron, 2001), is evident of how rural communities' representatives in the legislature could help their communities to prevent some of the problems those communities face.

Despite the present initiatives to conform to the international standard and donors' recommendations, the government of Liberia drafted a forestry reform law in 2006, which established the footprints for communities' participation in forest management. Despite this national effort, most participants and KIs believe some barriers still exist. These barriers are, but are not limited to, the establishment of the *CFDC* and Chapter 4: Section 1 of the Community Rights Law of Liberia, both of which have to do with community forest governance. This chapter establishes a five-member committee to manage the day-to-day affairs of the community forestry program. It also prevents members of the legislature from participating in community forestry agreements. Most participants see this as a problem, especially those participants who believe that having their government representatives onboard could make some difference in the way in which the social agreement is done. Participants expressed strong emotions as they discussed these concerns. The results of this study show that participants appreciate the present initiatives of the national government to include them in making decisions about forest management, but they see these two provisions of the CRL as a major problem affecting them. For a more descriptive analysis of these views, below is a chart that portrays the hierarchy of how logging concession agreements work.

6.7 Figure 3.3: A conceptual framework of concession agreements in Liberia



At the top of the chart is the executive branch of the national government through which concession agreements are negotiated and approved. The next level of the chart represents the logging or concession companies or investors. These companies are often foreign companies from Europe. The next level represents the Community Forestry Development Committee, Community Forestry Assembly, The Executive Committee of the Community Assembly, and the Community Forest Management Body. These different stakeholders are the driving force of the community forest governance. Participants expressed concerns that many members of these committees are not living within the affected communities, and therefore they are not representing or cannot represent them. The lowest ranking level of the chart represents the affected communities themselves. These concerns raised future uncertainties about the progress and longevity of the present community forestry initiatives in this region as well as other forest communities in the country.

These concerns should also claim the attention of all parties working towards the implementation of sustainable forest management in Post-war Liberia, including the national government. Findings from this study could serve as a lesson for the FDA and its local and international partners and its effort to mitigate these problems could prevent future conflict between loggers and forest communities. The GoL could also revisit or amend some of the provisions in the new forestry laws and/or regulations in order to immediately address some of the important issues that participants expressed. It is difficult to say whether or not the findings of the study are similar to other forest communities across the country, although it was brought to the researcher's attention that forest-dependent communities within the southeastern region of Liberia shared similar stories. Further researchers exploring the conditions of affected forest communities need to consider a larger sample of the population. This recommendation may help the national government, forest professionals, and the communities to better understand and promote collaboration in achieving sustainable forest management. Better still, it could help the government to work speedily and transparently with those different stakeholders mentioned above, especially the CFDC, in order for the committee to adequately disseminate relevant information concerning any social agreement to the communities they represent.

6.8 Limitation/Recommendations

Certainly, the results of this study cannot account for the problems of all forest-dependent communities in Liberia. Due to the scope of this study, the sole intent of the research was to gain insight from forest communities in southeastern Liberia, but the road conditions made it impossible for the researcher to cover the entire region. As a result, specific focus was given to Grand Gedeh County, based on the geographical location of the county to other forest-dependent communities within the region. However, these findings cannot be taken lightly given the fact that forest communities have similar interests in their forests and its resources. Besides, these findings are relevant to the communities and region in which the study was conducted. In addition, other studies in Liberia, Sub-Saharan Africa, and in other tropical forest communities

within the Amazon rainforest have consistently proven that forest-dependent communities shared similar interests and problems.

Furthermore, the solution that worked for forest communities in (Colfer and Byron, 2001) are likely to be the exact solutions needed for forest communities in the county and other forest communities in the country. This study is intended to be a springboard for rural people's views about collaborative management of forests and its resources and how they use the forest and what it meant to them. It is also intended to introduce a more transparent, practical, and collaborative to managing forest resources in Post-War Liberia when sustainability and human well-being are equally balanced. The study also highlights the importance of local participations and capabilities in forest management, and the effective allocation of forest proceeds to develop forest-dependent communities in Liberia.

Still, this study does not draw light on some of the important questions that may require further investigation, and the results may be used to conduct more extensive research about how forest communities are affected by the present community forestry initiatives. A comparative research in other regions would help to validate the concerns of the population of this study and possibly clarify some of the doubts that these participants have about the different parties that are working toward the achievement of SFM in the country. The best research that would explore this is a larger scale qualitative research. This may help to give the researcher a clearer picture of the extent of forest communities' attitudes in regards to forest management and sustainability.

Based on my field experience as the principal investigator of this study and given the findings of this research regarding the importance of direct participation in decision-making about forest concessions and SFM, this study sees forest management as a partnership. This partnership involves the collective effort of forest communities, the government of Liberia, and the logging companies. These three parties, to some extent, share common interests. Their interests include,

but are not limited to, income from selling forest products, sustainable use of forests, and proper management of forest resources. As such, this study recommends the following:

- 1) that the government of Liberia revisits some of the provisions of the 2006 forestry reform laws/regulations and the Community Rights Laws of 2009. For example, the provision (Chapter 4: Section 1) that prevents forest communities elected government officials from participating in community forestry agreements.
- 2) work with its international and local partners to provide reasonable alternatives for income generation in these communities. For example, donate food and/or build the capacity of local farmers to produce more food in those communities.
- 3) that forest-dependent communities take full charge of forest management and concession agreement, especially in areas where there are community forests; empower local communities to help protect forest resources and enforce forestry laws/regulations. For example, reduce the involvement of external parties that are not residents of the affected communities.
- 4) encourage forest communities to work with their elected officials, especially during the concession agreement decision making. For example, encourage traditional heads to be at the table of discussion, along with all parties, in order to improve transparency and accountability.
- 5) provide SFM education in rural communities and incorporate environmental health education in high school curriculum. For example, work with NGOs in providing regional education about the benefits of SFM.
- 6) strengthen land tenure, improve capacity building for the FDA, especially its Community Forestry Department, and improve good governance that accounts for transparency in the way forest concession deals are negotiated. For example, improve the relationship between the FDA and forest communities to ensure trust and mutual understanding.

- 7) enforce forestry regulations by conducting a periodic check and work with line ministries and the following government agencies: MOJ, MOA, EPA, FDA, and MLME to ensure all parties, including concessionaires, play by the rules. For example, conduct follow-up surveys to test the strengths and weaknesses of the new forest management initiatives.
- 8) avoid long-term logging concession contracts. For example, reduce forest concession from 25 years to six years, which commensurate with the full tenure of any elected government, and create provisions for amendment in all concession agreements.
- 9) finally, the GoL needs to consider a new Ministry of Natural Resources and Environment, and this new ministry should consider the combination of MOA, MLME, and the FDA into different departments. For example, a combination of these ministries would lead to a successful management of, not only forest resources, but also all natural resources and environmental issues in the country.

This would be consistent with findings from other studies that countries in Sub-Saharan African established specific departments to successfully deal with natural resources management and environmental problems. Liberia could learn from the Republic of Ghana's Ministry of Lands and Natural Resources, the United Republic of Tanzania's Ministry of Natural Resources and Tourism, the Republic of Guinea-Bissau's Ministry of Natural Resources and Environment, and the Republic of Zimbabwe's Ministry of Environment and Natural Resources Management. In recognition of the problem, several studies reveal that many Sub-Saharan countries, not including Liberia, began to revise their forestry policies in order to promote collaborative management of forests and other natural resources as far as the 1980s, and these departments were instrumental in doing so. It is not too late for Liberia.

6.9 Potential Benefits

This study also has the potential to help the recovery of Liberia's forest sector and to promote collaborative forest management throughout the country. It sets the basis for further research on

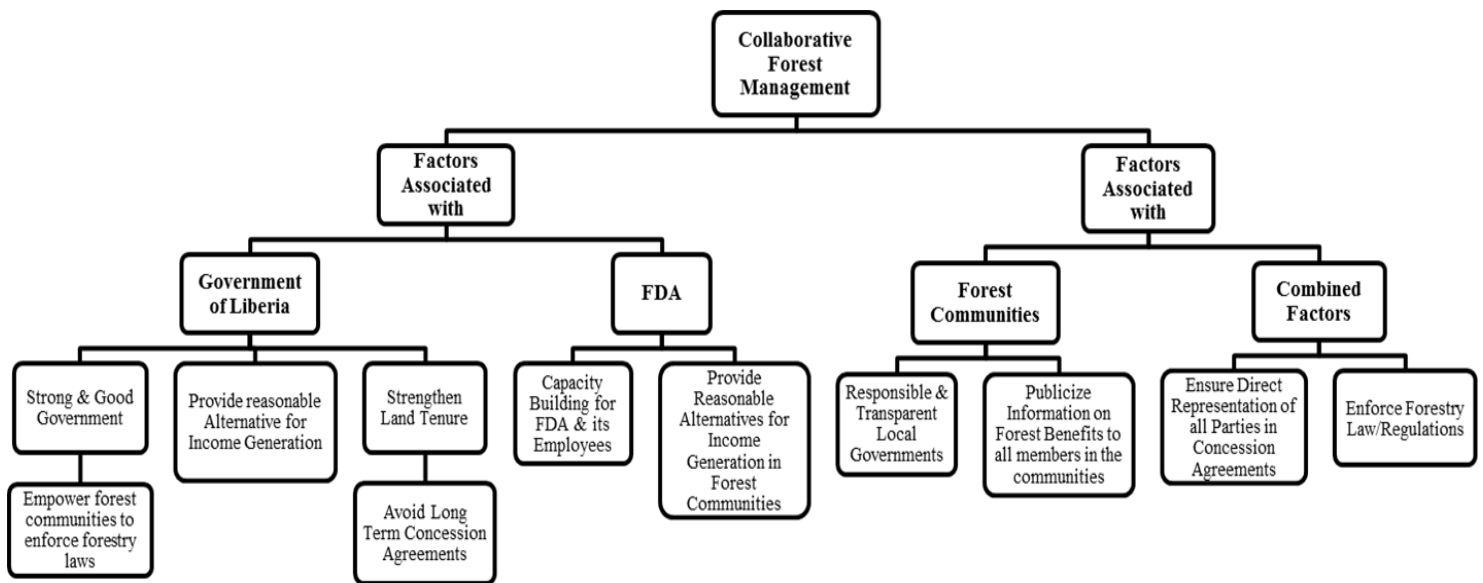
forest-dependent communities in the country for young Liberian professionals to engage in forest research. It could also promote local forest governance and decentralization plans as a means of maintaining trust between local and national governments. The findings of this study are essential for the GoL to evaluate the present forestry policies and/or initiatives in the counties to test its strengths and weaknesses. Another potential benefit is that this study could be used by the national government as well as county officials in Liberia, to increase the forest sector's contribution to the national economy, especially in poverty reduction and educating rural communities about the importance of biodiversity and sustainability. The recommendations of this study could also serve as the springboard for the government of Liberia to consider the establishment of a Department of Natural Resources and Environmental Management. This would be consistent with the natural resources management scheme that other Sub-Saharan African countries have undertaken. This study will also benefit forestry professionals and schools in Liberia and other international organizations and research institutions with an emic perspective of forest management in Post-war Liberia.

6.10 Implications

This study provides a more thorough understanding of the challenges of rural communities that live adjacent to the forestlands in Liberia. The Information provided in this study is helpful to the government of Liberia and other international professionals, working in partnership with the GoL to ensure sustainable forest management and ecosystem protection. This study contributes an applied approach to sustainable forest management and the present forest management initiatives in the country. If considered, the recommendations of this study would eventually increase the forest sector's contribution to the national government's revenue and contribute to the fight on poverty reduction. It would help the GoL to improve its enforcement of forest regulations and laws, especially in areas where there are forest concessions. This could be achieved by building the capacity of the FDA and its personnel. It will also help to educate rural communities, not only forest-dependent communities, about the importance of biodiversity and food security, all of

which are resources of the forests. In addition, this study could educate rural communities about new conflict resolution and forest resources management strategies and pave the way to incorporate the teaching of forest and environmental science into high school curriculums throughout the country. This is imperative for the country, given the FDA’s call for new breeds of forest professionals to succeed the already-retired population of most of its employees. This call was publicly made during the FDA Director’s 2013 speech about the gain prospect of the forest sector of Liberia, which can be found on YouTube. This study has the potential to connect students from Universities in Liberia and other natural resources and environmental professionals in Liberia to Ball State University and other international institutions, through field trips and international student exchange programs.

6.11 Figure 4.4: A conceptual framework of a Successful CFM in Liberia



In a nutshell, this conceptual framework helps illustrate the concept that would lead into a successful collaborative forest management in Post-War Liberia. The different squares below the center circle represent all of the different models that are essential to a successful CFM in Liberia. The central circle is the end result of the different models. More models could be added, however. When implemented, this framework would lead to a successful collaborative approach to forest management in the country. This framework would be fair and transparent to all parties, easy to

enforce, hold concessionaires accountable, but moreover, it would consider forest-dependent communities as one of the key enforcers of forestry laws/regulations. This framework is proven to lead to a more practical and robust approach to national forest management in a manner that is used wisely for the economic, environmental, and social benefits of current and future generations. This approach has proven to be effective in many African countries and would work more effectively in the case of Liberia, especially in promoting indigenous forest management systems.

Chapter 7: CONCLUSION

This study provides an in-depth exploration of forest-dependent views and motivation toward how they feel about the present initiatives to decentralize forest management and to include communities in forest management. Overall, the study concludes that rural communities' views and motivations are extremely important in forest management initiatives. This was also backed by past and recent studies. This study also concludes that the GoL plays a vital role in the achievement of collaborative forest management, especially in the researcher's study area. This claim was supported by both KIs and participants and other related studies. For most participants, it seems obvious that forest management is something that they are willing to do, but with the help of the government. This view was expressed by all participants. As such, it is implied that collaborative management is the way forward. The degree to which these communities believe that collaborative management is possible is dependent on internal constraints; for example, corrupt local officials, bad governance, lax forest laws/regulations/, government unwillingness to enforce forest laws/regulations, outside barriers, concessionaires' lack of respect for forest communities' traditions and values, and foreign encroachment.

The barriers to achieving collaborative forest management are enormous, but achievable, provided the national government is willing. In this study, the potential barriers include, but are not limited to, income, structure and regulations, labor, education, corruption, unqualified personnel, time, geographical location, and political will. Yet, another barrier to achieving this goal may be rural communities' views that the national government neglects them. They need an alternative to generate income, so that the forest is left alone. In a regional context, it is essential to achieve this as well, but there are other barriers. These include, but are not limited to, information dissemination among rural residents and their local leaders and the lack of basic infrastructures, i.e. communication towers, clean and safe drinking water, public schools and clinics, local government offices, and the lack of paved roads, which are the most important concerns that need immediate attention. However, forest-dependent communities had experienced

weaker and bad governance issues in the past and now. This experience has infiltrated the spirit of uncertainty and lack of trust between rural communities and the government. It is vital to restore a trusted relationship between these two parties, as the GoL seeks to achieve its present initiatives on sustainable forest management.

In addition, if we want to see a more long-lasting progress toward the achievement of SFM in Post-War Liberia, especially one that promotes food security and biodiversity, the collaborative approach recommended in this study must be considered. It would not be enough to include rural people in forest management initiatives, but to educate them and make them part of regulations and law enforcement. In other words, it would be logical if these communities were held accountable, to some extent, for the protection of the forests they heavily rely on for survival. This is a responsibility they so desired. In addition, this approach is proven to work in other developing countries, and as such, it would help to mitigate the corruption, lax regulations, bad governance, rural communities' dissatisfaction about the present forest management strategies, and much more. Both the government and its partners and the communities must work to remove any barriers that have the propensity to undermine the collaborative forest management initiatives in Post-war Liberia. The cost of achieving this is by far less than the cost of dealing with the result of a forest management policy that forest-dependent communities perceive as unfair and corrupt.

7.1 Personal Story

This section of the paper gives a brief background of how the researcher came up with the project and the experiences from undertaking this project. It also contains an overview of his reflections and the changes that happened throughout the course of this work.

I graduated from Temple University in Philadelphia, Pennsylvania, with a bachelor of arts in *Adult and Organizational Development* in May 2015. Prior to my graduation, I was interested in graduate school, but, at the same time, I wanted to pursue a graduate degree that would help me contribute to the national problems in my country, Liberia. A broken or fragile educational

system is one of the national problems, but pursuing a masters degree in education was not my first option, even though I am very interested in helping in this sector. Besides, I already had a bachelor of arts degree in education, so I was not interested in another arts degree. I began the search for graduate schools in the middle of my final semester at Temple University. I first applied to Temple's Master of Education in higher education program. I was accepted with a \$2,500.00 scholarship. I turned it down. I also applied to Indiana University's Master of higher education program and was accepted, but I turned it down. My third try was at the University of Indianapolis. I applied to their Masters of International Relations Program and was given a contingent acceptance. Finally, when I left Philadelphia in May 2015 to live in Indiana because of graduate school, I still continued the search. I Googled graduate schools with natural resources management programs. The first school to pop up on the list was Ball State University. I immediately called the graduate school because time was not in my favor. This was early July 2015. The graduate school referred me to the department of Natural Resources and Environmental Management. When I called the department, I heard a woman's voice. A generous and welcoming voice. It was Dr. Amy Gregg. She was the acting chair of the department at the time. She is now the chair and a member of my thesis committee. I asked whether or not my admission application could still be considered for the fall semester of 2015. She said yes, provided you are able to submit your personal statement on time. It was the best thing I heard in many years. For some reason I felt that I found a perfect graduate program and a perfect university for it. I told Dr. Gregg that I was coming over to meet with her the next day for more information and to complete my online application in her presence.

In short, an appointment was scheduled. The next morning, I dressed up as if I had a professional job interview. I wanted to demonstrate my seriousness and at the same time my professionalism. I drove from Indianapolis to Muncie, Indiana. It took an hour and a half. I finally met Dr. Gregg and we had a fruitful discussion about my desire to pursue this degree.

My interest in pursuing this project or degree was driven by my experience as a child in elementary school in Liberia. I had an ambition to help in conserving our environment, which was being destroyed by civil wars, pollution, and collapsing infrastructures. I also watched trucks take huge logs to the seaport of Harper, Maryland County because I used to live by the seaport there. My experience working in the gold mines really also stimulated my interests in the natural resources and environmental management issues because of the gross environmental degradation due to mining activities. In addition, I spent nine years in the forest of Grand Kru County, southeast Liberia during the period of the civil war. During those years, I was a child, but I still went to the farm with my older brothers and stepfather. I did all the hard work that was traditionally required of a grown up male in the town or village. It was then that I developed a passion for nature and ecology. It is against this background that I chose to focus this project on Liberia.

7.2 Experience and Reflection

When I began my first semester as a graduate student in August 2015, it was a dream come true. I pledged to some of my friends that I was going to do my best. I studied harder than I ever did as an undergraduate student. It was not easy, especially with Graduate Assistant (GA) work and a full time outside job. My first challenge was to choose a research topic. I first thought of studying the risks of illegal mining in Africa, but this topic was too broad, my professors told me. After a few weeks, I thought a collaborative management of forest resources was going to be a major issue in Liberia. I wrote down my ideas and presented it to my professor the following day. Luckily for me this professor, Dr. Joshua Gruver, who was teaching the introductory research course for graduate students at the time, was a professor of forestry. When I approach him with my idea, he said it was plausible to pursue. I immediately asked him if he could be my faculty advisor, and he almost instantly agreed. I felt a great relief after that because one of the major barriers in graduate school is to come up with a research topic. Two weeks later, I started to look for funding sources. I applied to the Benjamin Cohen Peace Fellowship Research Grant. It was a

huge and challenging task. For example, I took three classes in my first semester, I had research work to do for my GA, and a full time job to go to in Indianapolis every other weekend from 7:30 a.m. to 11:30 p.m. on Saturdays and Sundays. In addition to all of these tasks, I wrote a twenty-one-page proposal for the grant before the end of my first semester. It was the most challenging academic work I have ever undertaken. I spent almost all of my days in my assigned library study room. It was located in one of the quiet places in the library, on the fourth floor of Bracken Library. This gave me more time to keep focus and complete schoolwork efficiently. Overall, this research project has given me the skills and commitment that would help me to succeed in the real world. However, it is important that I mention the mental stress that I suffered, especially when I think of my late father who was my best friend and tutor. I sometimes feel that I have nothing to prove to anyone, except him. This feeling, however, would immediately leave me whenever I think of my son who was born in 2015, a few months after my father's death in October 2014. My father was my adviser and teacher of life. I looked up to him whenever I had complex issues, but he left me in the middle of difficulties, and left me with too many challenges that I could not have easily overcome. He is forever my role model.

7.3 How I did the work

In May 2016, I traveled to Monrovia, Liberia to collect my data and to also do my internship with the Liberian Forestry Development Authority (FDA). It took me three months, May to August, to collect all of the necessary information for this research. In early August, I returned to Ball State University from Liberia with my raw data. After briefing my committee members of the trip, I began my data transcription in Fall 2016, which started on August 21 and ended in December 2016. During this period, I took one class, coded, analyzed, and drafted my thesis. It was too much work to complete by one person in a few months, but I could not have asked any students to help me with the interview transcripts. There are several reasons behind this. One, the students would not have understood the accent of my participants. Two, a helper could have made mistakes during their transcription. The final reason was that I wanted to make this my personal

work and make sure that my participants' confidentiality was respected at all times. By the end of the semester, I completed the full draft of the thesis, with the help of my faculty advisor and my committee members. In the following semester, Spring 2017, which began in January 2017 and ended in May 2017, I worked on the technical structure and major grammatical issues of the project. On February 17, 2017, I defended my thesis, but took two weeks to work on a few updates that my committee recommended before I submitted the final project to the graduate school. Finally, on March 21, 2017, I did a poster presentation of the research at Ball State University's 2017 Student Symposium and won the Keys/Litten/Smith outstanding research award.

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APPENDIX A: Interview questionnaires

Key Informant Interview Questions

1. What are your job responsibilities and how long have you had this job?
2. Are you aware of any timber or logging activities in your constituency?
3. How often do you visit these communities? Do you know any traditional heads of those communities that would be good candidates for this research?
4. Are you aware of any challenges that your people face with the national government, in terms of job creation?
5. Have your constituents complained about deforestation challenges caused by logging companies or other activities? If yes, how are these challenges differ from those in the past?
6. Do you think logging activities in your county present any problems to your people, given the trend of forest resource mismanagement in the past? How do you think things have changed from the past to present?
7. Do you think rural communities should have decision-making opportunities concerning forest resources management? If yes, what is it that influenced your thoughts about this?
8. Is there anything else about this topic that you wish to talk about that I have not asked?
9. Based on our conversation, who else should I speak with?

Semi-structured Interviews Questions

1. What is your role in this community and how long have you played this role?
2. The Central question: How do you feel about logging activities in your community?
3. Do you think the forest resources here are being managed properly for the benefit of your community? If yes, why? And if no, why do you think it is not?
4. Some educated people argue that rural people do not know that keeping forest is important to their well-being and the health of the environment, what do you think about that?

5. Do you think the logging activities in your community are helping the community in any way? If not, what do you think should be done in order for your community to benefit from logging activities?
6. Besides logging activities, what are other benefits that the forests bring to your community?
7. Do you think the forests in your community were affected by the Liberian Civil War? If yes, How? And what changes have you seen so far since then?
8. What benefit, if any, do you think your community gets from the national government and the logging company in terms of development for your community, and how does the community feel about the benefit (s)?
9. What do you think needs to be done in order for your community and the national government of Liberia to benefit from forest resources or to protect the forest from deforestation?
10. Who do you think should take responsibility to manage the forests and its resources? Explain.
11. Is there anything else about this topic that you wish to talk about that I have not asked?
12. Based on our conversation, who else should I speak with about these topics?

APPENDIX B: Classification of Liberia timber and tree species

N O.	ABBR EVIATION.	BOTANICAL NAME	LOCAL/TRADE NAME	CLASS (STUM PAGE FEES)	CLAS S (FOR EST PRODUCT FEES)	usage
1	HAL	Hallea ciliata	Abura/Bahia	A	A	Furniture
2	CAN	Canarium schwiefurthii	Aiele	A	A	Construction, traditional medicine. It was transported to Europe and used as a substitute for gum-mastic to treat wounded soldiers in World War II (http://tropical.theferns.info/viewtropical.php?id=Canarium+schwiefurthii)
3	GUI	Guibourtia ehie	Amazakoue/bubinga	A	A	Heavy wood for construction, furniture, vehicle bodies, toys, musical instruments, and joinery.
4	ANI	Anigeria robusta	Anigre/Annigre	A	A	Plywood industrial
5	GUA	Guarea cedrata	Bosse	A	A	Pink color
6	CEI	Ceiba pentandra	Ceiba/Fromager	A	A	Construction
7	PIP	Piptadenianstrum africanum	Dahoma	A	A	Rail road, traditional medicine to treat mental disorder.
8	AFZ	Afzelia bella	Doussie	A	A	Exported
9	AFZ	Afzelia Africana	Apa	A	A	Exported
10	LOP	Lophira alata	Ekki/Azobe	A	A	Iron wood/rail road, bridge
11	TES	Terminalia superba	Frake/Limba/Afara	A	A	Construction
12	TEi	Terminalia ivorensis	Framire (baji,Emire)	A	A	Construction
13	CHL	Chlorophora regia	Iroko/Kambala	A	A	Ship construction, heavy-duty construction
14	CHL	Chlorophora excelsa	Odum/Iroko	A	A	Same as Iroko
15	KHA	Khaya anthotheca	Khaya/Acaju blanc	A	A	Furniture

Appendix B: Continued						
16	KHA	<i>Khaya ivorensis</i>	Khaya (Acajou D'Afrique)	A	A	Same
17	ENTC	<i>Entandrophragma condolei</i>	Kosipo/Abourd/Kro	A	A	Heavy-duty construction
18	NAU	<i>Nauclea diderrichii</i>	Kusia/Bilinga/Opope	A	A	Construction/roofing
19	GIL	<i>Gilbertiodendron preussii</i>	Limbali	A	A	Furniture/constructure
20	LOV	<i>Lovoa trichilioides</i>	Lovoa/Dibetou	A	A	Furniture
21	TIE	<i>Tieghemella heckelii</i>	Makore/Baku/Douka	A	A	Construction
22	DIS	<i>Distemonanthus benthamianus</i>	Movingui/	A	A	Construction
23	BRA	<i>Brachystegia leonensis</i>	Naga	A	A	Construction/ heavy wood
24	TAR	<i>Tarrietia utilis</i>	Niagon/Wishmore	A	A	Furniture
25	TRI	<i>Triplochiton scleroxylon</i>	Obeche/Samba/Wawa	A	A	Wawa/construction
26	ENTC Y	<i>Entandrophragma cylindricum</i>	Sapele/Sapelle/aboudikro	A	A	Heavy-duty construction/ does not float
27	ENTU	<i>Entandrophragma utile</i>	Sipo/Utilie	A	A	Use used in traditional to treat malaria and peptic ulcers.
28	TET	<i>Tetraberlinia tubmaniana</i>	Tetra/ Sikon	A	A	Use in local construction and for making canoes, boxes, and plywood.
29	ENTA	<i>Entandrophragma angolense</i>	Tiama/Edinam	A	A	Use for traditional medicine to treat fever, suitable for furniture and cabinet, ship building, floor, vehicle bodies and coffins.
30	PER	<i>Pericopsis elata</i>	Afromosia	B	B	Construction, valuable species for logging.
31	CHS	<i>Chrysopyllum africanum</i>	Akatio/Longui	B	B	Use as a fruit source for local people, uses for traditional medicine, and oil for making soap.
32	ANT	<i>Antiaris africana</i>	ako	B	B	Plywood, use in traditional medicine, the latex from the back is use for hunting poison, use for constructing canoes and plywood
33	RHO	<i>Rhodognaphalon brevicuspe</i>	Alone/Kondrotii	B	B	Use as a traditional medicine to prevent abortion, use for dye funeral cloth, light

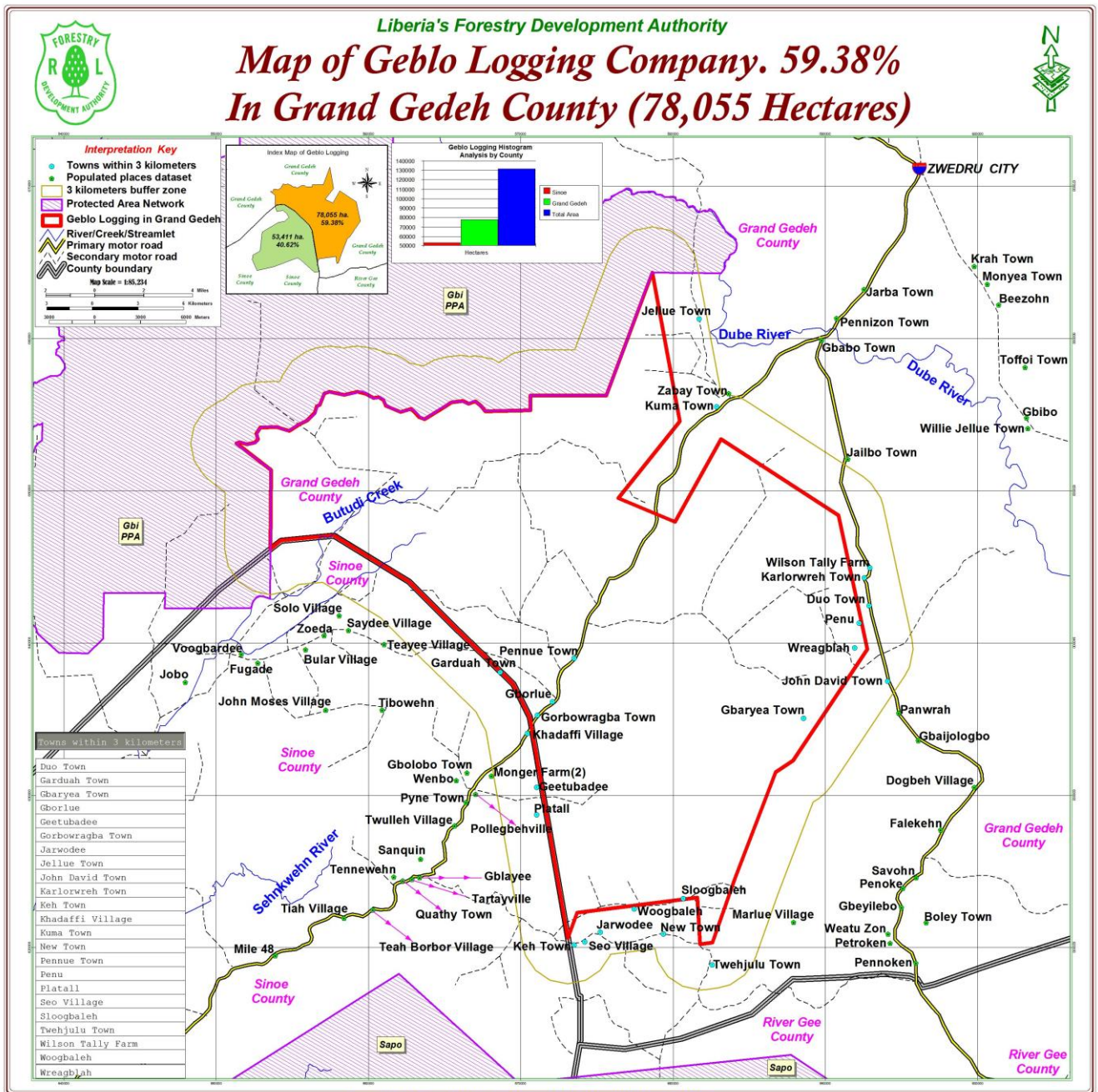
APPENDIX B: Continued						
34	CYN	<i>Cynometra anata</i>	Apome	B	B	Suitable for timber, construction, hunting and fishing apparatus, use for magic by local people.
35	TUR	<i>Turraeanthus africanus</i>	avodire	B	B	Use traditionally to treat fever, headache, epilepsy, and ship building, and vehicle bodies, charcoal and paper production.
36	HAP	<i>Haplormosia monophylla</i>	Black gum/Idewa	B	B	Furniture, good quality for timber, use for flooring, ship building, vehicle bodies, railway slippers and turnery.
37	BOM	<i>Bombax buonopozense</i>	bombax	B	B	Use as a packing material such as pillows and mattresses by local people.
38	DID	<i>Didelotia idae</i>	Broutou	B	B	Good quality for furniture, light carpentry, boxes and crates.
39	NES	<i>Papaverifera</i>	Danta/Kotibe	B	B	Use for traditional medicine, general construction, tool handles, boat building, gunstocks, plywood, and furniture.
40	DAN	<i>Daniellia thurifera</i>	faro	B	B	Use for furniture, use for plywood, decorative furniture.
41	PYC	<i>Pycnanthus angolense</i>	Ilomba	B	B	Use for traditional medicine,
42	ANO	<i>Anopyxis klaineana</i>	kokoti	B	B	It glues with all types of glues, paints, furniture frames, use for roof and canoes.
43	PTE	<i>Pterygota macrocarpa</i>	Koto/Ake	B	B	Use for traditional medicine to treat bladder and urinary problems, furniture, flooring, and house staircase.
44	MAM	<i>Mammea africana</i>	Mammea/Oboto	B	B	Use as a fruit source by local people, traditional medicine, furniture, primary timber product, and interior decoration.
45	MAN	<i>Mansonia altissima</i>	Mansonia/Bete	B	B	Use as a traditional medicine to treat leprosy, use for general and high-class joinery, use door and window construction, and railway coaches and ship fittings.

APPENDIX B: Continued						
46	OLD	<i>Oldfieldia africana</i>	Oldfieldia/Dantoue	B	B	Use as a traditional medicine, an excellent construction timber, use to make dock-gates and bridges, and is used in naval construction boats.
47	SAC	<i>Sacoglottis gabonensis</i>	Ozouga	B	B	Use traditional medicine in West Africa to treat fever, diarrhea, gonorrhoea, abdominal pain. Use is bridges and household constructions.
48	ERY	<i>Erythrophleum ivorensis</i>	Tali/sassiwood	B	B	N/A
49	COM	<i>Combretiodendron macrocarpum</i>	Abale	C	C	N/A
50	ONG	<i>Ongokia gore</i>	Angueuk /Kuwi	C	C	N/A
51	ANT	<i>Anthonontha fragrans</i>	Anthonontha/KIbo koko	C	C	N/A
52	ARA	<i>Araliopsis tabouensis</i>	Araliopsis/Grenian	C	C	Use as a traditional medicine to treat pulmonary troubles.
53	CAL	<i>Calpocalyx aubrevillei</i>	Badio/calpocalz	C	C	Traditional medicine use to treat women's aching breasts. It is use for local construction and canoes and plank making.
54	CEL	<i>Celtis adolfi-friederici</i>	Celtis/lokenfi	C	C	It is used as a traditional medicine to treat fever, cough, and headache.
55	DIA	<i>Dialium</i>	Dialium/Eyoum	C	C	Use by traditional people to treat several diseases. Use for vehicles, flooring, and a good fuel for charcoal.
56	ALS	<i>Alstonia boonei</i>	Emien/stoolwood	C	C	Use as a traditional medicine to cure pain, skin, diarrhea, and liver. Use for construction, musical instruments, and fishing apparatus.
57	COP	<i>Copaifera salikounda</i>	Etimore	C	C	Use for high-class furniture, flooring, light carpentry, construction, and joinery.
58	ZAN(FAG)	<i>Zanthoxylon gillettii</i>	Fagara/Olondu	C	C	Use as a traditional medicine to treat cancer, blood pressure, infections, and relieve pain. Use for tool handles, railway sleepers, and ship building.

APPENDIX B: Continued						
59	FUN	<i>Funtumia elastica</i>	Funtumia/ mutundu	C	C	Use as a traditional medicine to cure painful menstruation. Use for carving household utensils like spoon, bowl. As a timber, it is used for beams and rafters in buildings.
60	HAN	<i>Hannoa klaineana</i>	Hannoa/Effeu	C	C	Use for construction and joinery, flooring and furniture.
61	BEI	<i>Beischmedia mannii</i>	Kanda	C	C	Use as a traditional medicine to treat cough, intercostal pain, and rheumatism. Its woods are used for door frames, vehicle frames, furniture, joinery, construction, canoes, and cabinet work.
62	KLA	<i>Klainedoxa gabonensis</i>	Klainedoxa/eveuss	C	C	Use as a traditional medicine to treat chickenpox, small-pox, and joint pain. Its wood is used for heavy-duty construction, railway sleepers, heavy poles, heavy flooring, and furniture.
63		pterocarpoides		C	C	to treat several diseases. Its wood is used for interior construction, carpentry, planks, railway sleepers & poles.
64	PAR	<i>Parinari excelsa</i>	Parinari/Songue	C	C	Use as a traditional medicine to treat as a tonic, anemia. It is made into planks and timbers, furniture and excellent for railway sleepers.
65	PAK	<i>Parkia bicolor</i>	Parkia/Lo	C	C	Several parts of the wood are used as traditional medicine. It is considered suitable for the paper industry, carpentry, canoes, furniture, and joinery.
66	BER	<i>Berlinia confusa</i>	Pocouli/Ebiara	C	C	Use as furniture, joinery, cabinet making, flooring, and light carpentry.
67	UAP	<i>Uapaca guinensis</i>	Uapaca/Rikio	C	C	Use as a traditional medicine to massage to mature furuncles and to relieve migraine. It is used to massage children who are late to walk. Its wood is used for planks, local carpentry,

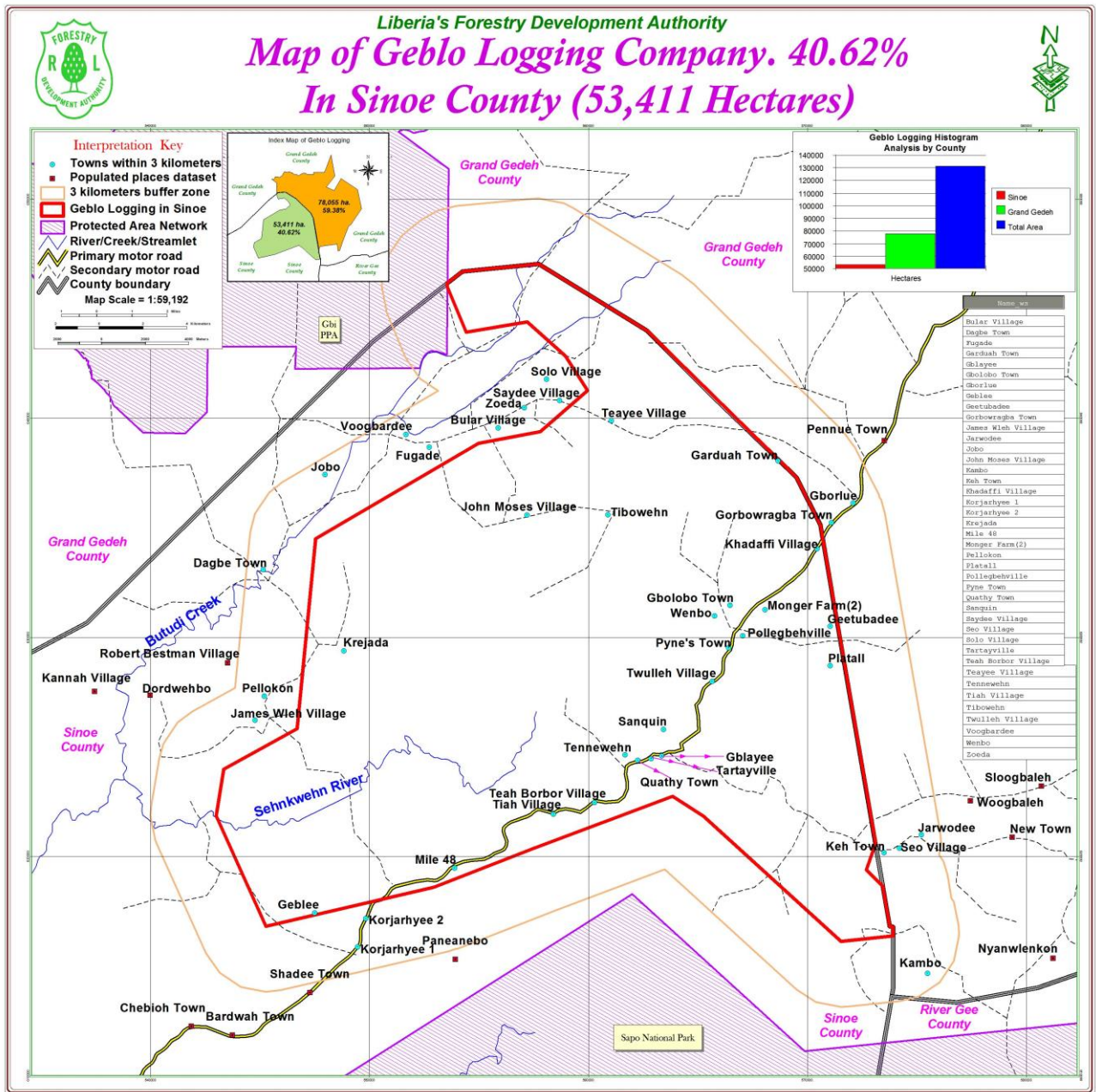
APPENDIX B: Continued						
68	AFRO	<i>Afrosersalisia afzelii</i>	Akuedao	C	C	It is used as poles and suitable for heavy construction, heavy flooring, vehicle bodies, and railway sleepers.
69	DAC	<i>Dacryodes klaineana</i>	Monkey plum	C	C	Use as a traditional medicine to treat painful menstruations. Its wood is exported from Liberia, use for mortars, axe handles and wagons, telegraph poles and railway sleepers.
70	DIO	<i>Diospyros sanzaminika</i>	Ebony	C	C	Use as a traditional medicine to treat pain and giddiness and epilepsy attacks. It's wood for furniture, axe and hammer handles, and small poles.
71	ERY M	<i>Erythroxylum mannii</i>	Dabe'	C	C	Use as a traditional medicine to treat intercostal pain and pleurisy. Its wood is used for ordinary tools, general construction, interior and exterior paneling and joinery, flooring and ship building.
72	IRV	<i>Irvingia gabonensis</i>	Irvingia	C	C	Use by local people as a source of protein, dietary fiber, and fruit sources.
73	NEW	<i>Newtonia aubrevillei</i>	Pellegrin	C	C	Its bark is used as a traditional medicine to case aphrodisiac (sexual stimulation). Its wood is used to make planks and canoes.
74	STR	<i>Strombosia pustulata</i>	Afina	C	C	It is often used as building poles, transmission poles, heavy-duty flooring, and tool handles.
75	XYL	<i>Xylia evansii</i>		C	C	Traditionally, its leaves are used as a substitute for soap and as a toothbrush. Its wood is use for local construction because it resists against both fungi and insects.

APPENDIX C: Continued



Map by FDA's GIS Department, 2016

APPENDIX C: Continued



Prepared by the Geographic Information Systems & Remote Sensing Laboratory of FDA

Map by FDA's GIS Department, 2016

APPENDIX D: Some of the endangered animal species of Liberia

Local name	Important Facts	Animal Group	Major threats
Western red colobus	Listed as endangered species on the International Union for the Conservation of Nature and Natural Resources (IUCN) Red list of threatened species and is protected by law in Liberia	Mammals	Habitat loss and hunting for bush meat.
White-neck Picathartes	Listed as a vulnerable on the IUCN Red list of threatened species and is protected by law in Liberia.	Mammals	Primarily threatened by logging activities, agriculture, bush burning and human disturbance.
Leopard	It is classified as near threatened by IUCN Red list and is protected by law in Liberia.	Mammals	Intense persecution and trophy hunting are the major threat facing leopards.
Pygmy hippopotamus	Listed as an endangered species on IUCN Red list of threatened species and is protected by the Wildlife and National Park Act of Liberia. Found only in Liberia, Guinea, and Cote d'Ivoire.	Mammals	Deforestation, hunting, and regional conflicts are the major threats.
Western chimpanzee	Listed as an endangered species on IUCN Red list of threatened species and is protected by the Wildlife and National Park Act of Liberia.		Habitat destruction and degradation slash and burn agriculture and logging, including hunting for bush meat.
Western African dwarf crocodile	Listed as vulnerable species on IUCN Red list of threatened species and is protected		Subsistent hunting.

APPENDIX D: Continued			
Bongo	Listed as endangered species on IUCN Red list of threatened species and is protected by the Wildlife and National Park Act of Liberia.	Mammals	N/A
Black and white colobus	Listed as vulnerable species on IUCN Red list of threatened species and is protected by the Wildlife and National Park Act of Liberia.	Mammals	Habitat loss and hunting.
African elephant	Listed as vulnerable species on IUCN Red list of threatened species and is protected by the Wildlife and National Park Act of Liberia.	Mammals	Habitat loss and fragmentation and poaching for ivory and meat.
Leatherback turtle	Listed as vulnerable species on IUCN Red list of threatened species and is protected by the Wildlife and National Park Act of Liberia.		Climate change and population pathogen.
Diana monkey	Listed as vulnerable species on IUCN Red list of threatened		

APPENDIX E: Photos of Liberia's forest and its plant species



Canarium Schweinfurthii retained in Land cleared by agriculture
Photographed by Adjima Thiombiano: African Plants



Base of trunk showing the buttresses of Piptadeniastrum Africanum
Photographed by Scamperdale: African Plants



Azelia Africana growing in its native habitat
Photographed by Stefan Poremski: African Plants



Trunk of Lophira alata
Photographed by Scamperdale: African Plants



A typical forest in Liberia
Photographed by Birdlife-SCNL

APPENDIX E: Continued



Antiaris africana canopy view
Photographed by TanzaniaPlantsCollaboration



Base of *Guibourtia ehie*
Photographed by Eric Akouangou



Terminalia superba
Photographed by Gunther Erichhorn



Triplochiton scleroxylon & a sample of its wood
Photographed by Pleauthon Pierre

APPENDIX F: Glossary: people, places, events, organizations, and concepts

Americo-Liberian: A member of the freed slaves who migrated from the Americas to Liberia in the 1800s, or liberated African descent. They are also referred to as mulattoes.

ATU: Anti-Terrorist Unit, elite Special Forces military unit founded by former President Charles Taylor.

Book People: Participants' way of making reference to the GoL and its international partners.

Blood Timber: Is a phrase coined to refer to the illegal sale of timber by rebel forces or the use of timber proceeds to fuel armed conflicts.

CFDC: Community Forest Development Committee, elected officials from rural forest communities who serve as representatives of those communities.

CITI Training: Collaborative Institutional Training Institute, a required training that every student working with human subjects (IRB) or animals (IACUC) needs to complete prior to submitting proposals to the grad school at Ball State University.

Code: A word, number, phrase, or symbol assigned to participants' responses as they answered a question.

Code-coefficient: A unique cardinal number assigned to each code.

Coding: The process of organizing and sorting data into specific categories.

Coding Notes: Notes, ideas that the researcher jots down during the coding process which were later helpful in data analysis.

Concession: A contractual right granted by the community and authority to a private commercial enterprise, whether by negotiation, bidding or other legal means, to harvest and market forest resources for commercial gains.

Emergent Codes: Other codes, ideas, concepts, actions, meanings, and relationships that the researcher discovered while analyzing the data.

EPA: Liberia's Environmental Protection Agency.

EU: European Union.

Europe Logging Company: One of the logging companies operating in Grand Gedeh County.

FDA: Forestry Development Authority. A state corporation established in 1976 by an Act of legislation in 1976 with the mandate of ensuring the sustainable management and conservation of Liberia's forest and related natural resources for the benefit of current and future generations. This mandate was further strengthened through the natural resource Law of 1979 and the 2006 Forestry Reform Law is the most up-to-date policy that governs forest management in Liberia.

FFI: Fauna & Flora International. An international non-governmental organization working in partnership with the Government of Liberia.

FIFES: Forest Incomes for Environmental Sustainability.

FMC: Forest Management Contract, a 25- year concession between the national government logging companies, based on the provision of the new forestry reform law of Liberia.

Geblo Logging Company: one of the logging companies operating in Grand Gedeh County.

GoL: Government of Liberia.

Grand Gedeh: A county in South-East Liberia, the county of former President Samuel Doe.

Green Advocate: Association of Environmental Lawyers of Liberia.

IRB: Institutional Review Board, also known as the independent ethics committee, or research ethics board, is a type of committee used in the US to formally approve, monitor, and review biometrical and behavioral research.

KIs: Key Informants. Elected government representatives of the research county.

LACE: Liberia Agency for Community Empowerment.

LPC: Liberia Peace Council, one of the warring factions predominately made up of the Krahn tribe of former President Samuel Doe.

MLME: Ministry of Lands, Mines and Energy.

MOA: Ministry of Agriculture.

MOJ: Ministry of Justice.

MOU: Memorandum of Understanding. An agreement signed between the government of Liberia, loggers, and the communities.

Pre-Set: A list of codes created by the researcher after his interviews and prior to coding his data.

Resource Curse: Refers to the paradox that countries with an abundance of natural resources tend to have less economic growth, less democracy, and worse development outcomes, and poorer families than countries with fewer natural resources.

SAMFU: Save My Future Foundation.

SCNL: Society for the Conservation of Nature in Liberia.

Semi-Deciduous Forest: The term semi-deciduous forest is used botanically in the tropical rainforest to refer to plants that lose their foliage for a short period.

Sustainable Forest Management: The management of forests according to the principles of sustainable development. It involves keeping the balance between three main pillars: ecological, economic and socio-cultural.

The 3C's: A term used in Liberia to refer to Commercial, Community, and Conservation in the new forest management approach.

Theme: A combination of similar codes.

USAID: United States Agency for International Development.

Zedrew: The capital city of Grand Gedeh.