Understanding Diversity: A Study of Livelihoods and Forest Landscapes in Liberia

Aiah Lebbie, Robert Fisher, Francis Odoom, Wollor Topor,
Joe Flomo and Garvoie Kardoh

(With the assistance of Lawrence Greene, Michael Fofanah, Boima Johnson,
Tennema Coleman, Weedor Lamine, Hurlormah Worllarwulu)

September 2009

Report prepared for
Livelihoods and Landscape Strategy
Forest Conservation Programme
IUCN (The International Union for Conservation of Nature)

This study was undertaken for the Livelihoods and Landscape Strategy (LLS) of the Forest Conservation Programme, IUCN (The International Union for Conservation of Nature).

LLS is supported with funding from the Dutch Ministry of Foreign Affairs (DGIS).

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

This study would not have been possible without the support of many people who assisted in many different ways. We would like to thank the Honorable John T. Woods, Managing Director, and Mr. Moses Wogbeh, Technical Manager of the Community Forestry Department of the Forestry Development Authority in Liberia for supporting the initiative. We would also like to thank Mr. Stephen Kelleher, coordinator of IUCN's Livelihoods and Landscapes Strategy, for his enthusiasm and support, both practical and intellectual.

In the seven communities we visited and conducted the study, many individuals provided immense support in information sharing as well as participating in the drawing of the participatory maps. We thank the chiefs, youth leaders and government administrators who made our work in these communities insightful and rewarding. While the names are so numerous that we cannot mention everyone by name, we would particularly like to acknowledge the time and efforts of the following: Mr. Sam Gbagaye, Paramount Chief Mrs. Nora Gaye, Mr. Alfred Lansana, Mr. Fasuma Darbor, Mr. Joseph A. Kollie, Mr. Thomas Tarnue, Mr. David Kormah, Mr. Valagbaon S. Korzu, Mr. Vasco Kollie, Mrs. Mary Korteu, Mr. Tamba Farma, Mr. Sam David, Mr. Bohn Guission, Mr. Thompson L. Garneo, Mr. Tarr Yoe, Mr. Nathan George, Mr. Don Garneo, Mr. Garvoie Kardoh, Mr. Morris Saygrehen, Mrs. Tity Geaygar, Mr. Alhaji Sombai, Mr. James Massaquoi, Mr. Morris Massaquoi, Mr. Umaru Sombai, Mrs. Sadiatu Sombai, Mrs. Jassie Kasolu, Mr. Socrates S. Sombai, Mr. Robert M. Karpue, Mr. Daniel Karr, Mrs. Wresema Clinton, Mr. Thomas Gbayteh, Mr. Saah Blamah and Mr. John Nyumah.

FOREWORD

It is not that long ago that the mention of Liberia conjured forth images of civil war, child soldiers and helplessness. The strife in the country and in neighboring Sierra Leone brought the world's attention to "blood diamonds" and "blood timber", valuable resources illegally exploited to fuel conflict. With the advent of peace earlier this decade, and the impressive transition to democratic processes that brought Africa its first female Head of State, new opportunities exist to use the same natural resources once used to fuel conflict to bring stability, income generation, employment and improved livelihoods to Liberia's people.

Much international attention and investment has been provided to reform and maximize the potential of Liberia's forest sector over the last years. While often stated, it is important nonetheless to bear in mind that Liberia comprises the largest remaining block of Upper Guinean Forests in West Africa. This biodiversity importance is impressive as these forests contain a vast array of fauna and flora. Overall the social, economic and environmental services these forest ecosystems represent, and the opportunities they might provide for sound development, are enormous.

When forest sector reform got underway in earnest in 2004-2005, a relatively progressive paradigm emerged to focus efforts and maximize the potential of the resource. This is colloquially known as "'The 3 Cs" of forestry – with a focus on the (large scale) commercial, conservation and community uses and potentials. For most of the intervening years, the focus of investment was largely on the commercial value and exploitation of the forests, and less on the potential economic and environmental values of the conservation and community "Cs". This likely made sense in the immediate post-conflict setting, with strict UN sanction placed on timber exports and the urgent need for the country to generate revenue. That said, the importance of forests to communities – to livelihoods, subsistence, family health and nutrition – has been incredibly undervalued in comparison.

A number of issues, however, are preventing the true value of these forests – their diverse goods and services – from being fully valued, at the local, national and regional levels. The lack of community-based experiences and learning on traditional and quite possibly sustainable forest management strategies is a major constraint when it comes to documenting the case for local people who depend on forest resources for a significant part of their livelihoods. As a consequence decision makers do not have sufficient evidence that would allow them to make informed decisions on future forest management policies that take into account community forest management strategies. Overcoming these basic, but essential, shortcomings, by providing sound field based knowledge and experience to inform policy, is a central strategy of IUCN's Livelihoods and Landscapes Strategy.

This paper, and the research that supported it, is an effort to help fill the gaps regarding the diverse values of these forests to Liberia's rural communities, and thus the nation itself. It is hoped that this information, coupled with the activities that are now taking place in communities as a result of this work, will demonstrate that the community "C", and the values and importance of forests for the rural and, arguably, national economies, will be elevated to a more prominent place in policy discussions regarding the long-term and sustainable use of Liberia's forests.

Stephen Kelleher
Coordinator
Livelihoods and Landscapes Strategy
Forest Conservation Programme
IUCN – The International union for Conservation of Nature

GLOSSARY

CFM	Community forest management
CRL	Community Rights Law
farina	an alternative name for gari
FDA	Forestry Development Authority.
fufu	fermented cassava
gari	grated and fire-dried cassava
poro	men's secret society
sande	women's secret society

NOTES

1. Exchange rates. At the time of fieldwork the exchange rate between Liberian dollars (L$) and United States dollars (US$) was approximately LS60 to US$ 1.

2. Measurements used in this report. Non-metric measures (miles, gallons, acres etc) are normally used in Liberia. These measures are used in this report except where informants provided information in metric measures, in which cases their usage is followed.

ABSTRACT

Community forestry is high on the forest policy agenda in Liberia. However, relatively little is known about the diverse variety of customary forest management institutions and arrangements. Similarly, while the importance of forests and forest products in rural livelihoods is generally acknowledged, there has been little systematic study and analysis of just how forests fit into rural livelihoods. There is a danger that community forestry policy will be based on a false assumption that there is some sort of vacuum of institutional arrangements in rural areas and that standardized models of community forestry management will be developed and imposed on diverse existing community forestry management practices.

This was an issue because international experience has shown beyond any doubt the risks associated with imposing standard models where local contexts are highly varied and especially the risks of imposing new management arrangements without understanding what already exists. These risks include the potential to undermine existing customary management arrangements.

The study "Understanding diversity: A study of Livelihoods and Forest Landscapes in Liberia" was initiated by the Livelihoods and Landscapes Strategy (LLS) of IUCN (The International Union for Conservation of Nature) in order to obtain a clearer picture of the variety of forest use and customary forest management practices in Liberia and to use the information and insights to contribute to policy formation.

The study was carried out by a research team who visited each of seven landscapes with a variety of features, including different forest types and different livelihood strategies. The study applied direct observation combined with participatory methods.

The study found that, despite common assumptions, many sites maintain customary methods and rules for the management of forest resources, or at least of some forest resources and that there are institutional practices for decision-making about use of these resources. The local institutions are diverse and well established.

The study also confirms the fact that rural people in many parts of Liberia rely heavily on a variety of tree and forest and other natural resources and products for their livelihoods and it provides a picture of the diverse ways in which these different resources are used as livelihood assets.

Chapter 1

Introduction

INTRODUCTION AND BACKGROUND

Since the end of the civil war in Liberia in 2003, significant efforts have been put in to reforming the forestry sector. These efforts have been especially significant in two major ways. The first of these has been the development of new forestry policies encapsulated in the *National Forestry Reform Law of 2006* and its associated rules and regulations. Developing clear policies and rules has been partly motivated by the need to put the timber industry on a clear legal footing as a condition for the removal of United Nations bans imposed to prevent the partial funding of the civil war through illegal timber. The second major theme was the emergence of community forestry as a key element in forest management. This has been associated with concerns to clarify the place of tree and forest tenure within customary land tenure.

An early sign of emerging interest in community forestry as an element of forest policy is indicated by the incorporation of "community" as one of the "three Cs" of forest policy (commercial, conservation, community). The emerging interest in community forestry resulted in the workshop *Towards a shared vision and action frame for community forestry in Liberia* held in 2005 (CIFOR 2005). The participants in this seminar included a range of international partners under the umbrella of the Liberia Forest Initiative. Although the workshop generated enthusiasm, targeted funds for work in and with communities on forest management did not really materialize until 2007-2008.

During the reform process a Department of Community Forestry was established. A Community Forestry Working Group was formed to develop an approach to community forestry. Membership of the working group including officials from the Forestry Development Authority (FDA), representatives from local and international NGOs, the Food and Agriculture Organization of the United Nations (FAO) and the World Bank. The current work is a product of shared concerns about the need to develop an understanding of community forestry management approaches and how they would work in Liberia.[1]

One of the provisions of the 2006 forestry law was the requirement that "a comprehensive law governing community rights with respect to Forest Lands" should be presented "to the Legislature for consideration" by the FDA "within one year of the effective date of this [the National Forestry Reform] law. For various reasons, which we do not intend to discuss in detail here, the drafting of the community rights law was delayed. As the drafting process began it became clear that there were diverging views about what it should contain. A draft was finally submitted to the legislature in late 2008 and passed by both houses. However, as there was a dispute about the content of that draft, and the

[1] See Brown (n.d.) for a review of the prospects of community forestry in Liberia

process by which it was submitted for consideration, it was not passed into law by the President. A second competing draft was submitted and was passed by the lower house (but not the Senate). This draft had passed through the lower house without the earlier draft being withdrawn. At the time of writing the matter remains unresolved and the President has requested that the conflicts be resolved by the various parties before there is further consideration of the law.

While the CRL is important, it may not ultimately deal with questions about how to implement community forest management locally. Community rights to forests do not necessarily equate with community forest management. This work focuses on generating information to inform any eventual policy decisions on the community "C" of the "three Cs". This may not be contingent on clarifying the rights issue. In fact, more empirical information, such as that presented in this report, needs to be generated to ensure that the community "C" reaches its maximum potential.

A key issue in the debate about community forestry relates to concerns about the nature of tenure over trees and forests. Much of the land in Liberia remains under forms of customary tenure, except in cases where such land was alienated by other forms of title. Customary tenure is recognized as a legitimate form of tenure, but most customary land has not been formally registered. Importantly, the status of trees and forests on customary land remains ambiguous. While land may fall within the category of "customary tenure", specified areas of forest are legally under the control of the FDA. Much of the policy debate about community forestry is about how these ambiguities can be resolved and what control the FDA will be able to exert over community forests in the context of customary land.

A very comprehensive study by Alden Wily (2007) has documented the features of customary forest tenure and argues that law should recognize customary rights to trees and forests. These issues remain unresolved at present. Lomax (2008) has also written about governance issues related to forestry in Liberia, including customary tenure.

THE STUDY

The study "Understanding diversity: A study of Livelihoods and Forest Landscapes in Liberia" was initiated by the Livelihoods and Landscapes Strategy (LLS) of IUCN (The International Union for Conservation of Nature) in order to obtain a clearer picture of the variety of forest use and customary forest management practices in Liberia[2]. The outcomes of the study were to provide information and also to assist IUCN to select two landscapes where field work would be done to generate applied research and (improved) livelihood benefits to benefit local communities and to inform any eventual policy decisions related to CFM.

The study was motivated by a concern that community forestry policy was developing without adequate understanding of diverse local contexts and practices or

[2] IUCN was engaged in Liberia before the civil war and returned as a member of the Liberia Forest Initiative to assist to reform the forest sector after the conflict ended.

acknowledgement of functioning local arrangements. There was a very real risk that policy could impose a standard model for community forests across the country. This was an issue because international experience has shown beyond any doubt the risks associated with imposing standard models where local contexts are highly varied and especially the risks of imposing new management arrangements without understanding what already exists. These risks include the potential to undermine existing customary management arrangements.

The community forestry policy seemed to be developing on the basis of an assumption that there was some sort of local "institutional vacuum"[3]. The study was implemented to examine and document the types of institutional arrangements for forest use and management that exist in Liberia and to contribute the information into policy discussions related to community forestry.

There was little understanding of a number of important elements of forest/people relationships. In particular there was remarkably little knowledge of existing "community forest" management practices or of the types of forest-based livelihood systems that exist in various parts of the country and there was very little practical appreciation of the heterogeneity. There was also little systematic understanding of the livelihood strategies and poverty status of various populations and sub-populations[4].

While it is obvious from the most superficial visit to rural markets that large quantities and a considerable variety of forest products are collected and sold, very little documentation exists on just what forest products are used for subsistence or sold to markets and there is almost no knowledge of market chains for those forest products that are already marketed. This is especially important because forest product use and marketing are likely to differ markedly in different location, according to factors such as forest type, proximity to towns and markets, road access, proximity to Protected Areas or concessions (and, accordingly, depending on access to products).

There was also limited knowledge of the subsistence values of forest products or their linkages with household incomes and other values such as health.

Just as the connections between forest and livelihoods are not well understood, there is little or no knowledge of local decision-making processes or technical practices.

It should be noted that some studies have been carried out in a small number of sites or locations by organizations such as Flora and Fauna International (Koffa et al. 2005) and the Center for International Forestry Research (CIFOR), but these studies cover only a small portion of the country (and, thus, very little of the variation within the country) and are not widely known. More recently, two "community forestry assessment reports" have been prepared under the program "Capacity Building and Designing of Community

[3] Fisher (1990) discussed the tendency of forest officials in Nepal to assume a local institutional vacuum and to attempt to impose standard institutional models on communities.
[4] The study addressed livelihood strategies, but did not attempt comprehensive poverty assessments. A separate exercise was planned for that purpose.

Forestry Pilots: A Natural Carbon Strategy for Liberia" (Sheppard et al 2009a and 2009b). These reports contain detailed and useful survey data on species, agricultural activities etc, but do not deal in detail with customary forest management practices and arrangements, such as decision-making processes. The FDA has recognized the need for a broader overview of community forestry practices and forest-livelihood linkages and proposed a "profiling study" of thirteen communities some time ago. This, however, did not occur due to lack of funding.

While community forestry management practices have not been widely documented, customary tenure systems have been very thoroughly documented in the work of Alden Wily (2007).

In recognition of the need for greater understanding of the variety of types of forest/livelihood systems in Liberia, the LLS program supported a study of seven different cases scattered throughout the country. The study aimed to cover a variety of forest/livelihood situations. While it was not intended to be comprehensive, it aimed to cover as much variety as possible in terms of:

- a variety of landscapes, including mixed secondary forest landscapes, agroforestry and a variety of forest types (tropical forest, savannah, mangrove)
- proximity of population to forests, PAs, concessions;
- proximity to markets;
- ethnicity of community.

The study aimed to document:

- forest type and condition;
- types of forest products used;
- types of products marketed;
- tracing of market chain of forest products identified in local markets;
- relative importance of forest products and other livelihood assets;
- forest access (including customary tenure);
- local forest management practices and regulations;
- decision-making processes regarding forest use.

The primary aim of the study was to provide a preliminary overview of some of the varied existing local forest management practices and particularly to demonstrate that there was no "institutional vacuum". In other words it was intended to demonstrate that arrangements for forest management already exist.

A secondary aim of the study was to identify two landscapes to act as pilot landscapes for the LLS program.

THE LIVELIHOODS AND LANDSCAPE STRATEGY AND THE CONCEPT OF LANDSCAPE

IUCN's Livelihoods and Landscape Strategy is a global program which aims to show that improved livelihoods and conservation outcomes can be achieved at a landscape level by addressing constraints including constraints related to forest governance, access to resources and marketing arrangements.[5] The program works on the landscape scale rather than focusing solely on areas of forest.

The concept of landscape refers to an area with a mosaic of different types of land use.[6] Different parts of the landscape meet different human needs and livelihood strategies tend to draw on meeting a variety of needs from different parts of the landscape. Thus, forest use cannot be seen as occurring in a vacuum separately from other elements of landscape use and management. For these reasons, the "Understanding diversity" study aimed to examine forest use in the context of wider patterns of landscape use and management.

The study paid considerable attention to the general economic/livelihoods activities in each landscape in order to show how forest use and management fit into overall livelihood systems. It also examined leadership, social organization and decision-making, because these are central to understanding how resources are used and managed. Each case study presents a picture of a landscape and how people live within it, not just a picture of narrowly forest focused activities and institutions.

[5] In this report forests are defined broadly, to include mangroves and savannah and the study includes on-farm trees as well as trees in forests.

[6] For discussion of the landscape approach see Maginnis et al 2004 and Fisher et al 2008.

Chapter 2

Methodology

STUDY SITES

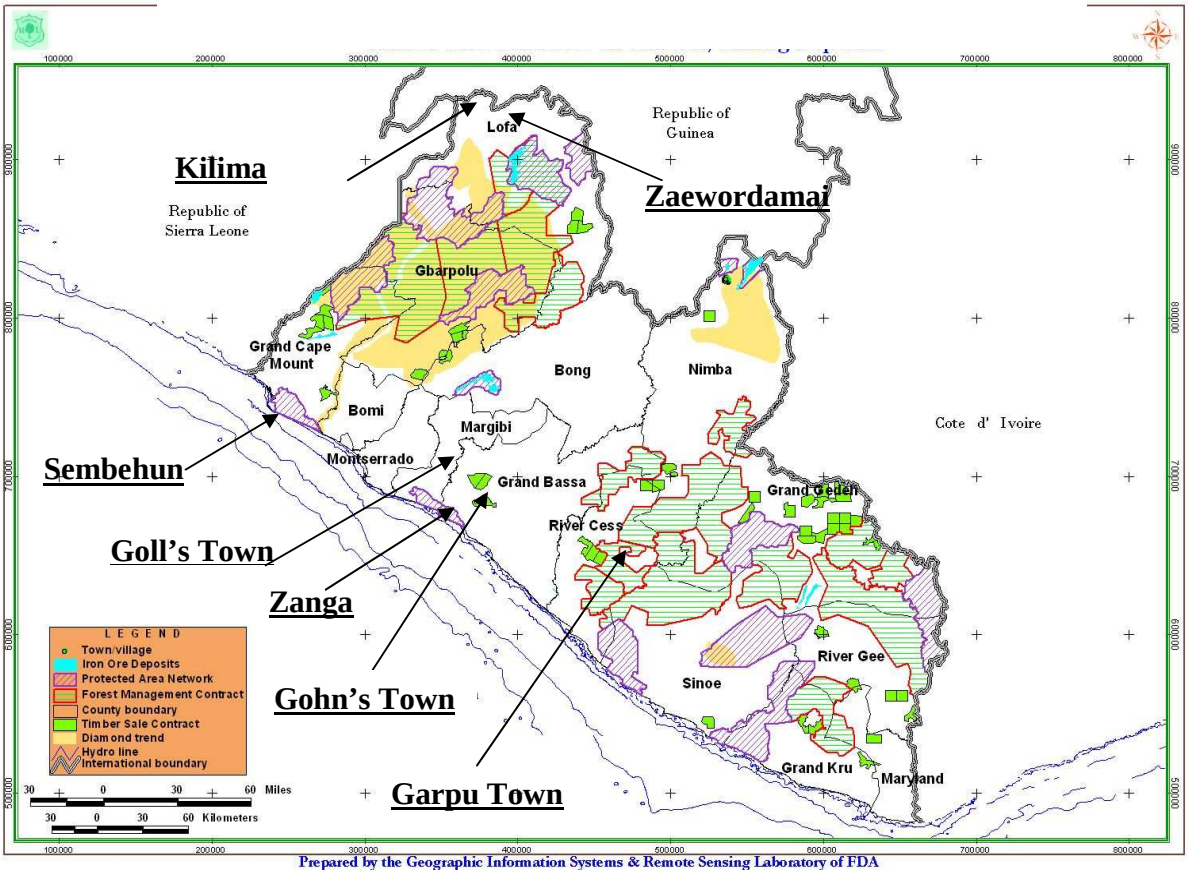
As the study was intended to obtain a picture of the diverse ways in which forested landscapes are being managed in Liberia, landscapes for study were selected so that a variety of landscapes with different types of forests and land use would be covered. The need to cover a variety of other factors such as proximity to protected areas and markets was also taken account. The selection was purposive and no attempt was made to select a random sample.

Seven landscapes were selected. The list of study types and reasons for selection are presented in Table 1. A location map is presented as Figure 1. These sites were proposed at a workshop attended by a diverse group of stakeholders, including civil society groups and government agencies.

Table 1: Study Sites and Reasons for Selection

Study Site	**County**	**Reasons for Selection**
Zangar	Grand Bassa	Mangrove forest, fishing, harvesting of NTFPs
Sembehun	Grand Cape Mount	Coastal savannah, mangrove and rainforest, fishing, ecotourism
Garpu Town	Rivercess	Rainforest, former logging concession, slash-and-burn agriculture, high poverty
Goll's Town	Margibi	Community ownership of forest, pit-sawing activity, forest closer to Monrovia, forest closer to large rubber plantation
Gohn's Town	Grand Bassa	Ongoing logging, diverse forest types, high poverty
Zaewordamai	Lofa	Diverse forest types, cocoa plantations, logging activities, remote location
Kilima Bendu	Lofa	Savannah, limited wood resources, coco and oil palm plantations, rice cultivation, markets closer to Guinea and Sierra Leone

Figure 1. The seven study landscapes



THE STUDY TEAM

The study team consisted of IUCN staff and consultants, officials from the FDA, an academic from the College of Agriculture and Forestry at the University of Liberia and students from that Faculty.

DATA COLLECTION AND ANALYSIS

The methodology utilized for the case studies represented a compromise between full scientific research and rapid surveys. The approach could be described as ethnographic survey, utilized a wide range of assessment tools such as participatory mapping with community members, timelines/calendars, transect walks and triangulation, and dialogue. Before the case studies were initiated, a two day training workshop was conducted for the research team, followed by a field trip to familiarize the participants with the range of tools common in rapid assessment.

Following the training workshop, a reconnaissance visit was made to each selected community to inform the leaders about a pending visit to conduct the case studies. Each visit lasted for a couple of hours, during which the purposes of the study were introduced to the community and they were given the opportunity to ask questions for clarification. In some cases, community members took the team on a brief tour of their landscape.

Prior to our visit to each of seven communities, an activities plan in the form of a matrix was produced to serve as a guide for addressing key issues in the selected community. For each community, data was collected on the community, land use and land tenure, natural resources, marketing of forest products, and socio-economic and environmental changes. The matrix served as a guide. Information was collected by informal interviews. No questionnaires were used.

During each study, the community was again briefed on the rationale for the study before proceeding with preliminary participatory mapping exercise. Following the mapping exercise, the community was stratified into three groups, comprising the youth, elders/chiefs and women. Team members were allowed to follow each of these groups to collect the necessary data. Between 4-5 days was spent in each landscape. Every evening, presentations were made by each team member on key findings with the information assessed by the team to identify where possible gaps exist for follow up. After two days of data collection, the community was brought together for a preliminary presentation of the result and asked to comment on the participatory map. Triangulation with informed opinion resulted in corrections being made. A final presentation and vetting of data by the entire community occurred at the end of each visit.

As can be seen from this account, the process was highly participatory, involving iterative cycles of data collection and feedback by community members.

Two aspects of the study had important “spin-offs” in terms of “capacity building”. The first of these was the extent of community participation. The second was the participation of students from the University of Liberia. These aspects are discussed in Appendix 1.

The profiles of landscapes and communities in the following chapters present the findings of the study. Comparative tables summarizing some of the features of the case study populations are in Appendix 2.

Chapter 3

Zangar

INTRODUCTION

Zangar is located in the Marshall Wetlands in the Grand Bassa County, some 75 miles from Monrovia on the road leading to Buchanan. The village is located on the edge of the proposed Marshall Wetland Protected Area. It is associated with six smaller villages with one or two of them situated inside the proposed protected area.

The predominant vegetation is a mix of littoral ecosystem (mangrove), riparian forest, secondary forest and grassland. The landscape was selected because of the high dependence of the community on forest resources, especially the harvesting of poles from forest for construction, the harvesting of Sclerosperma thatch for roofing materials and the harvesting of a mollusc locally known as "Kiss Meat" from the mangrove forest for income generation. There is also strong local involvement in the management of forest resources, as signified by the appointment of a "bush manager" and the continuous existence of sacred groves in the community. The selection of this site allowed us to examine community forest management practices and the types of forest-based livelihood systems.

HISTORICAL BACKGROUND AND DESCRIPTION OF COMMUNITY

Zangar village located at the edge of the proposed Marshall Wetland was founded in the early 1900s by a warrior chief called Zangar, after whom the village got its name. The original location of the village was a place called Yulohn, very close to present day Bezon, one of the six satellite villages of Zangar. The lack of quality drinking water forced the chief to move the inhabitants to the banks of the Zin River (a tributary of Gawein River), where present day Zangar is located.

There are three foot bridges on the road leading into Zangar, which are covered by water during the rainy season. High water levels prevent vehicles from easily reaching into Zangar.

There are approximately six houses in Zangar with corrugated zinc roofing, but the remaining forty-seven houses have thatch roofing made out of two shrubby looking palm species belonging to the genus *Sclerosperma*, a locally abundant plant resource. Nearly all of these houses are made out of materials locally available around Zangar.

The immediate surroundings of the houses are well maintained, with some households having planted carpet grass and maintained a small flower and vegetable gardens either in front of or on the side of the houses. Most houses have a fairly large-size *palava*[7] hut for

[7] From English "palaver". A hut where discussions occur especially in cases of dispute management.

a kitchen which also doubles as storage for rice seeds. Some of the houses have outside bathhouses made out of poles and raphia thatch, but all the houses lack toilets. Hand pumps or a well for drinking purposes are lacking in Zangar or any of its satellite villages, and most drinking water is fetched from the Zin River. During the rainy season, households also collect rainwater for drinking purposes. Household waste, predominantly composed of organic matter, is thrown on the outskirts of the village. Common fruit trees seen in Zangar and the other villages included cocoa, coconut, banana, pear, breadfruit, mango and citrus.

No health or educational facilities exist in Zangar or any of the satellite villages. Sick persons are either taken some 13 km away to the nearest health center across three river tributaries with rickety log bridges or put in boats (e.g. Bezon village) and taken to Marshall City, a distance that takes at least 3 hours 30 minutes by boat. Diarrhea was reported as the commonest illness followed by malaria. The community collects its drinking water from the stream and household wastes thrown on the outskirts of the village are washed into the stream at the height of the rainy season when such health problems are magnified. Domesticated animals such as pigs, goats, ducks and chickens frequent the garbage sites as most animals are allowed to roam freely in the community.

Population
The current population of the village is 223 with the vast majority belonging to the Bassa ethnic group. Other ethnic groups recorded in the village included Krahn, Mano, Grebo and Nigerian (Ibo). The current population of Zangar is lower than what it used to be before the war.

Education
Illiteracy in the village is very high, and out of a total population of 223 (minus one child who died during our stay), less than five out of 97 children were attending school. Fewer adults in the village have ever been to school.

Facilities and Employment Opportunities
A church, called the Union Baptist Church, serves the entire community and nearly every member attends this church. There are two video clubs, with most of the shows taking place at night. The electricity generated at night is also used to charge mobile phones. The youth association in Zangar has also constructed a football (soccer) pitch, and hosts soccer tournaments with surrounding communities.

The lack of a formal sector means that most people are self-employed, largely depending on the natural resources to meet their household and economic needs. Key areas of self employment include farming (rice and cassava), collection and sale of “kiss meat” (a mollusc), collection and sale of *Sclerosperma* thatch, fishing, crawfish harvesting, tapping of rubber, carpentry, processing of sugar cane into alcohol, blacksmithing and video shows. The collection and sale of kiss meat is the predominant economic activity in the community.

Community Organizations
There are three local associations: the Zangar Town Development Association (ZDA), the Women's Development Association and the Zangar Youth Association. The ZDA appears to be defunct, with only the youth association having some functionality, largely focused on sports and paid labor. Other forms of social organization include the church, the *poro* (a secret society for men) and the *sande* (secret society for women).

LEADERSHIP AND DECISION MAKING

The leadership structure in Zangar is distributed across several key components including chief, elders, youth, sacred institutions, women's group and the church, all of whom play a critical role in decision making in the Zangar village and its six associated villages. Each of the six villages has a chief that reports to the chief and elders of Zangar village. In addition, a "bush manager" has been appointed by the elders primarily to manage access to forest resources in the six villages associated with Zangar. This was done to prevent over-exploitation of the forest resources by outsiders as well as members of the community who might want to connive with outsiders to exploit the resources. Moreover, there were security concerns, especially over people getting lost in the forests and fearing retribution from central government.

Outsiders coming into the community for the first time have to make their presence known through the local authority, primarily the chief. Most outsiders come to have their presence felt through a "stranger father" figure who will be a local resident on whose authority the outsider can count for support. It is through this "father" figure that the outsider can cultivate land and possibly come to have rights like any other resident.

The chief, who is appointed by the wider Zangar community through a unanimous show of hands, is the primary source of authority. The immediate governing structure includes the chief, assistant chief, an announcer/village crier and a messenger. This is regarded as the formal structure and links Zangar to the national governing structure at district and county levels. Providing advice to the chief and the rest of the community are six elders, all male, who have attained this position as a result of their age, length of residence, and association with the male secret society. Most members of this group are over fifty years old and have four to five children who participate in communal labor such as roadside brushing. Appointment to the position of elder requires that the individual pays a fee of L$250 and a large bottle of beer or cane juice (local alcohol distilled from sugar cane). The fee payment is made to the existing elders and is not made available to the rest of the community members. It was indicated by the elders that their sources of income are limited, and their age limits their participation in any income earning activities such as the collection of kiss meat, harvesting of Sclerosperma thatch or the cultivation of sugar cane for wine production. Once an individual attains this position, he is prevented from participating in roadside brushing and bridge repairs, arduous tasks considering the number of roads and bridges that need fixing every year. Women are not part of the group of elders, and the key reason for this is that women are generally considered to be scared of making decisions, but also because membership in the male secret society

prevents women from taking part as certain key decisions are often decided on in the male sacred grove, to which women have no access.

The various institutions play a role in conflict resolution: For example, when there are conflicts between the youths, the youth leadership meets to resolve it, and if the matter is unresolved, it is then take to the chief and assistant chief to decide the matter. If the matter is still unresolved, the elders are involved. If either the plaintiff or defendant is not satisfied with the ruling of the elders, the elders then instruct the chief to write a letter to the magistrate to handle the matter outside of the village.

On issues of crime such as theft, fighting, murder and land dispute, the chief links the culprits and defendants with the clan chief, the paramount chief and magistrate. For disputes concerning land or fighting, the issue is referred to the Clan Chief, who is located in Owens Grove community. If the crime involves stealing, it is referred to the Paramount Chief, also in Owens Grove. When fighting results in blood being spilled or in murder, the issue is referred to the Magistrate (in Buchanan).

Land disputes are, in principle, referred outside of the Zangar administrative structures as indicated by the two pathways that were suggested by community members. Generally, the elders suggested the first pathway, while the youths suggested the second pathway.

First: CC → PC → Commissioner → Magistrate → Circuit court

Second: CC → PC → Magistrate → Land Commission → Superintendent

However, in practice, the only reported land dispute in the community dates back to 1986, when people in the Kpocon community claimed a portion of Zangar territory. The dispute was later resolved in favor of Zangar, and since then, there have been no new cases of boundary or land disputes.

LAND AND RESOURCE TENURE

The land of Zangar can be divided into two types, upland and flood plains, with each type associated with a different tenure regime. The flood plains are primarily under private land ownership due to their importance in the cultivation of sugar cane. The soil type is clayey, and the seasonal flooding of the Zin River brings in rich nutrient that fertilizes the crop. Individual ownership prevents encroachment, allows some transfer and there is no approval required from the community for use and transfer of the flood plains land. Both men and women have equal rights to private ownership of the flood plains for sugar cane production, although limited availability of capital prevents women from greater investment in the cultivation of the flood plains.

The uplands are under a form of communal tenure combined with individual (“private”) use rights allocated depending on one’s length of stay in the community and type of crop cultivated. Access to land for the cultivation of rice and cassava has no limitation although it could be best described as temporary. After the crops are harvested and the

individual is not interested in cultivating the land a second time, another community member expressing interest in the said site can be granted temporary user rights by the local authorities. In order to cultivate permanent tree crops, one needs to be an indigene of the area or to have been resident there for between 10-20 years. The level of negotiation could allow for land ownership for cash crop cultivation. Women's access to land is not limited. If you are an outsider but married to a citizen of Zangar, your chances of gaining individual access to land increases. Leasing of land is possible.

NATURAL RESOURCES AND LIVELIHOODS

The Zangar territory is comprised of a diverse range of vegetation types, ranging from moist forest, to coastal savannah, mangrove, farm bush, old rubber plantations and agro-pastoral land. Most of the resources the community needs are extracted from the secondary forest, mangrove and savannah and includes poles, thatch, kiss meat, fish, bushmeat, canoes and medicinal plants. The thatch material used for roofing was common and abundant in the forest, savannah and freshwater swamp forests and readily regenerates within a year following harvesting.

Animals known to be harvested for bushmeat include duikers, pangolins, kiss meat (from the mangrove) and crabs. The mangrove forest is very extensive and in a very excellent condition as no harvesting of the trees was observed. Medicinal plants are also collected but fewer individuals were found to have extensive knowledge of medicinal plant usage, with this specialized knowledge restricted mostly among the women, especially those associated with the *sande*.

The key natural resources which sustain the lives of the people include the following:

Kiss Meat
Kiss meat is a type of mollusc comprising of three species harvested along the mangrove banks when the tide recedes and constitutes a major income source for the community. It is collected all year round especially between 11am and 2pm. Both men and women are involved in its harvesting. Individuals can collect at most 1.5 bags in a session. The price of a bag of kiss meat in Zangar varies with the season, low during the dry season (L$250-300) and high during the wet season (L$400-450). At the height of the rainy season, a bag of kiss meat is sold at "Kiss Meat Junction", some three kilometers from Zangar at L$500-600. Seasonal price fluctuations are attributed to the weather, as it is easier to collect during the dry season than in the wet season. In addition, there are prolonged periods of low tides during the dry season, allowing more people to be involved in its collection and thereby depressing market price.

There has never been any local conflict over the collection and sale of kiss meat, and locals move across community territorial boundaries to collect without any tenure restrictions or regulations. It is generally believed that kiss meat is a gift from God and there is a general belief among the locals that it will never be over-exploited.

At the market level, "middlemen" (actually all women) visit Zangar with some staying for a week at a time to buy, pack and transport the kiss meat to Monrovia. Some of these women have kin in the community, and often leave money with them to buy and collect kiss meat on their behalf, and are then called/phoned to come and collect them. One woman we interviewed indicated that she buys between 10 and 20 bags per visit, and often does three trips per month. She pays on average L$300 per bag and pays head carriers to transport a bag of kiss meat to the "Kiss Meat Junction" for L$25-50. The cost of transportation to Monrovia (Old Road Market) is L$50, where her regular customers who buy from her in bulk are located, and pay L$700 to her for a bag. When harvested and bagged, it can stay fresh for weeks once ants are prevented from infesting the bag (it is never dried or smoked).

Immediately adjacent to the Zangar territory is Wroto Town, a place with a high density of kiss meat but also a high concentration of chimpanzees on three of its islands. In this area, kiss meat is a major source of cash income and the best season for collection is the dry season. But during low tides and when the food for the chimpanzees is delayed, they also go in the low tide areas to harvest crabs and in the process compete with people collecting kiss meat. Most people from Zangar would love to go collect kiss meat around Wroto Town, but the presence of the chimpanzees prevents them from doing so. Likewise, people from Wroto Town, scared of the chimpanzees on some of the islands with kiss meat, are now moving further into the Zangar territory to harvest kiss meat, and there are fears that future displacement by the rising chimpanzee population would lead to more pressure on the kiss meat resource around Zangar. Already the area of Norkon has been deserted as a result of the chimpanzees. Based on rising fears about the chimpanzees, Luke Boboqui, a resident of Wroto Town said: "If the chimps can swim the people of Wroto Town will never live here like Norkon." Amos Page, another resident said: "Kiss meat and fishing is our only livelihood, but chimps trouble us." On August 14, 2008, the town chief of Norkon, and Mr. Amos Page were attacked by chimps while collecting kiss meat.

Fish and Crawfish

The height of the fishing season is October to May. Men are largely involved in it and use hooks, nets and traps to harvest the fish. Women fish collectively in groups and use nets around some of the streams during the dry season. Most of the catch is for home consumption but surplus fish is sold. The main fish caught are plank, pipe, catfish and tilapia (buka). No smoking of fish occurs in Zangar community, and this could partly explain why the mangrove forest is still relatively intact.

Harvesting of Forest Trees

Other forest resources harvested include Raphia (to make fish/crawfish traps), Sclerosperma (roofing materials), poles, timber and trees for making dugout canoes. Most individuals in the community know how to process the rachis of the Raphia frond to make fish traps, but a few individuals who produce in excess, sell this to others in the community or take it to the weekly market to sell at L$10. Chainsaw activities in the community are now limited mostly to the production of timber for use by community

members. Extensive use is made of poles and thatch for house construction in the community, but no sales of poles were noted. Thatch, is however, harvested for sale.

Sacred Groves
There are three sacred groves, two for the men and one for the women, but currently only two are in use. The two in use are within the immediate confines of Zangar village, one for the men and the other for the women. These two groves measure a little under three acres altogether, but the male sacred grove located some forty-five minutes walk from Zangar, close to the village of Bezon measures roughly nine acres and is not in use, although it is still maintained by the community as it contains the spiritual vestiges of the community. Any infringement is severely dealt with. Any uninitiated person that strays into the grove will be initiated, sometimes forcefully, either in the same grove, or nearby grove that has ongoing initiation ceremony. There are heads of the institutions (both male and female) responsible for the groves, although it is the responsibility of every member of the community to guard against infringement.

NATURAL RESOURCE MANAGEMENT ARRANGEMENTS

The "Bush Manager"
An adult male has been appointed as a "bush manager" by the community elders with responsibility for coordinating and managing forest resources as communal property. The "bush manager" is a member of the *poro* society. Individuals interested in the use of poles or planks for construction first consult with the bush manager who ascertains what quantity of forest resources are needed and determines availability before consulting with the elders and seek their approval. Following consultation with the bush manager, the elders give a verbal approval before the harvesting of the poles or planks begin. There are however, grounds for refusal especially when it comes to commercial pit-sawing activities. However, the elders have often been forced by the youths to rescind their decision should they refuse to give permission for such activities, as they do not want to be seen as anti-development.

OTHER LIVELIHOOD ACTIVITIES

Farming
Average farm size is about three acres, but can range between one and five acres[8]. Farms are generally cropped with rice and cassava, although a monoculture of cassava is frequently encountered.

Plots for farming are assigned by the local authorities (often comprising the town chief and elders) under a communal management system. Major constraints to cropping are lack of seeds or planting materials, and no extension support is available in the community. The cultivated crop in one season does not last long enough into the next cropping season, leading to most farmers to complain about hunger during the farming season. Although upland is the predominant land area cultivated for rice and cassava, rich

[8] People don't actually measure their farms in acres but in terms of the number of "buckets" of seed rice planted.

inland valley swamps were also noted to be in cultivation with rice, although no year round cultivation of these sites was noted.

Most people use fence to protect their crops against animal damage and others use dogs to chase and capture grass cutters[9]. Birds are problems on the farms, and most tools used by farmers are made in the village community by a blacksmith.

Sugar Cane Cultivation and Distillation

Sugar cane is a major economic crop grown in Zangar and nearly every person (male or female) is involved in its cultivation. Much of the sugar cane is produced around the flood plains where the plots are under individual/private tenure regime. Once the land has been assigned by the community to an individual, it becomes the private property of that person and he or she is free to cultivate, retain in fallow or transact with it. Three types of sugar cane are cultivated: 77, B52 and white cane. The dry season is the peak of distillation, and the milling machine for crushing the canes is owned by an individual who lives in Marshall City. The farmer is responsible for providing fuel for crushing the cane as well as feeding the machine operators during the crushing. For every six drums of crushed sugar cane produced, the farmer takes four drums and gives two to the mill owner. A drum of crushed cane when distilled produces ten gallons of cane juice (local alcohol). In one situation, a female farmer produced eleven drums of crushed sugar can in one year and gave 4.5 drums to the mill owner, while she retained 6.5. After processing the crushed cane, she produced on average 65 gallons of local alcohol. The cost of locally produced alcohol is L$1200 per gallon, giving her L$78,000 (US$1,258) per annum.

Charcoal Production

Most charcoal currently being produced in the landscape is from the harvesting of old rubber trees, which are in the process of being replanted. Individuals use chainsaws to cut them down and process them into manageable sizes before producing charcoal. A bag of charcoal is sold for L$100, and a single production can yield anywhere between 100 and 200 bags.

SOCIO-ECONOMIC AND ENVIRONMENTAL CHANGE

There was more forest in the past than there is today, and the decline over the years has been attributed to cultivation of the land for rice through slash-and-burn agriculture[10]. According to Oldman Thompson, one of the oldest elders in the community, the kiss meat population is believed to be declining, although, as mentioned earlier, the notion of over-exploitation and extinction is yet to be fully grasped by all in the community, as the resource is seen by most to be provided by nature/God and therefore inexhaustible. The

[9] Grass cutters are a type of rodent hunted for bushmeat and regarded as a delicacy in much of West Africa.
[10] The term "slash and burn" is routinely used in Liberia, although it is a pejorative term which tends to ignore a great deal of international literature which suggests that it can be a sustainable form of land use under certain conditions. "Swidden" (forest farming) is a more neutral and preferable term. However, we use "slash and burn" as it is more recognisable in Liberia.

thatch (*Sclerosperma sp.*) used for roofing is still believed to be abundant and during our reconnaissance in the field, we generally saw a large resource base. There has been no change in the size and quality of the mangrove forest, as the trees are seldom used for construction, charcoal making or the smoking of fish.

There has been a decline in economic condition, with more poverty now than before. Cattle grazing was a dominant source of income before the war and its attenuation is believed to have led to a decline in income opportunities, especially among the older folks. Riparian forest, important for flood plains sugar cane development, is now being cleared more rapidly than before, as distillation of sugar cane is seen by many as a major income earner. There have been no improvements in education, sanitation and health situation in the community.

Chapter 4

Sembehun

INTRODUCTION

Sembehun is located in Grand Cape Mount County, some 145miles north of Monrovia on the road leading to Robertsport. The dominant vegetation types include rainforest located on very steep mountain slopes, coastal savannah interspersed with fresh water swamp forests, and mangroves. There is strong dependence of the community on its natural resources, especially the diverse forest products for ecotourism, chainsaw logging, bushmeat, firewood, charcoal, fish and timber for construction of fishing boats. This site is located within the proposed Lake Piso Protected Area Network, and is easily accessible throughout the year. The site was chosen particularly because it was seen to have potential for ecotourism.

HISTORICAL BACKGROUND AND DESCRIPTION OF COMMUNITY

According to oral history, the town of Sembehun was originally located on the banks of a creek called Behn-la, a Vai dialect name meaning "soup water" or water filled with fish. In the seventeenth century, the village of Behn-la was established by a wealthy woman called Wamaninor. She fled for her life from Beh Town and or Kpallah (among the Dei tribe in Montserrado County), where she sentenced to death for defying the men's *poro* society. Wamaninor and her brother (informants could not remember his name) escaped the night before her execution. She settled at Behn-la, while her brother settled at Latia. At Behn-la, Wamaninor proposed the name Sembehseenah (meaning, place of strength) for the village she established.

In the eighteenth century, a feeling of insecurity was perceived by the people of Sembehseenah. They consulted a soothsayer who told them of a disaster that would befall the village in the 10-15 years to come if they did not leave the village. This gave rise to several consultations with the soothsayer to help identify land that would bring peace and prosperity to them. Based upon the advice and special instructions from the soothsayer, the site for present day Sembehum was selected. The first person and the only youth recommended by the soothsayer to start clearing of the site was Fahn Sieh, who was believed to be one of the descendants of Warmaninor.

Among the founders of the present day Sembehum was Neweh Sombai, a great warrior and also a descendant of Wamaninor. From Behn-la, Wamaninor did not settle in present day Sembehum, but instead went up to Mount Walor (in the forest reserve overlooking Sembehun) where she discovered a village inhabited by people. There she settled and continued to feed her relatives in Behn-la with food from the mountain. Wamaninor finally died at Mount Walor. Over many generations, the name Sembehseenah evolved today into Sembehum, meaning powerful town.

Present day Sembehun is located in the territory of the Tombey clan and in Tombey Commonwealth District of Grand Cape Mount County. The district is sub-divided into Upper and Lower Tombey. Upper Tombey consists of three towns, including Bonu, Mandoe and Falie, while Lower Tombey consists of Latia, Sembehum, and Tosor. Sembehum serves as the clan head quarter while Latia serves as district head quarter. Each sub-division (upper and lower Tombey) is headed by a general town chief who serves under the supervision of the clan chief. Both the upper and lower Tombey are headed by a Paramount chief who reports directly to the superintendent.

Population
The current population of Sembehun is 1,038 persons, comprising 527 males and 511 females (adult population is 291 and children and youth is 747). Among this population, there are forty returnees and twenty refugees.

Community members identified several sources of friction between returnees/refugees, and the rest of the community members. These issues included:

- Returnees and refugees introduced charcoal burning into community,
- They cut down trees including palm trees at random for charcoal burning and palm cabbage production,
- They often break community laws by fighting and abusing in the town, and
- They refuse to take part in community development activities.

Education
Sembehun has one school (Sembehum Public School) established in 1989 by the community through assistance from the Government of Liberia. An annex was built in 2006 by an NGO called Action Aide. There are eight teachers in the school, four of whom are on government payroll and the remaining four are volunteers. The volunteers are compensated by a member of the community who is currently not resident in the village. There are a total of 360 students in the school, 202 are boys and 158 are girls.

Facilities and Employment Opportunities
A mosque is present in the community, reflecting the predominant Muslim population. Only one latrine exists as four others are out of use. There are three hand pumps (of which one goes dry during the dry season while two turn muddy during the wet season), but most people were still found using a nearby streams as water sources. The community has a palava hut, but was recently damaged by a falling tree branch (but has now been repaired).

There is a clinic – the Sembehum Community Clinic. It was first established around 1993-94 by ECOMOG (West African Peace Keeping Forces), using a private building. Following the establishment of peace in Liberia, a new clinic was established away from the old building. A local NGO called African Humanitarian Action (AHA), with the

community providing sand and other local materials, (cement provided by an NGO), helped to establish the new clinic. Currently, six staff members are employed at the clinic, and their monthly salaries are paid by AHA. Average attendance at the clinic per day is 25-30 persons during the farming season, but this increases during non farming season (wet season). The most common illnesses recorded at the clinic are respiratory diseases and malaria.

The community is served by a good unpaved road. Mobile reception in the village is difficult but reception is possible on the slopes of the mountain forest nearby.

The school and clinic provide formal employment for a few community members. One or two individuals are also formally employed at Robertsport (the county headquarters). The rest are self-employed, especially in gari production.

Community Organizations
There are several different local organizations in Sembehum. These include:

- The *Sembehum Development Committee (SDC)* which is the mother organization responsible for all developmental activities within the community. It supervises community work during the construction of public facilities and other community-related activities. It also prepares documentation for the female working group called *Mukuama*. SDC is headed by a chairman and his co-workers include the secretary, youth leader, a female representative, co-chairman, the town chief and the overseer.

- *Mukuama* (meaning "we can do it") is the female working group within SDC responsible for transporting sand, water and preparation of food during any community-related construction work. This group is also involved in vegetable production and also recently involved in laying the foundation for the construction of a community guest house to cater to tourists in the near future.

- The *Islamic Development Committee (IDC)* is responsible for religious affairs and distribution of relief items donated to the mosque and Islamic community.

- *Arrow Star* is the youth football club responsible for sporting activities. It provides free services to the community during community development projects. It is also engaged in contract activities to earn income to support the football team.

- The *Steering Committee* is a temporary committee set up to supervise a particular task at a given period of time, and disbanded when the activity is completed.

Other organizations which draw upon the general citizenry of the county include the Piso Forum (an environmental group set up to manage Lake Piso) and FACE (Farmers Associated to Conserve the Environment). The Piso Forum was intended to provide its members with funds to raise cattle and ducks for income purposes, although this is yet to be undertaken, because the members of the community who attended the meeting did not brief the community fully and the project stalled. FDA provides technical support to the

group. The group is still evolving with a leadership problem, although a meeting held in Robertsport sometime ago came up with an interim leadership.

In the past, FACE organized a four-day workshop and invited surrounding communities in the area to talk about environmental and natural resources, creating awareness about charcoal making and impact on the mangrove. It has also advocated the planting of trees to protect the mangrove. An acacia nursery was set up for a period of two years, supplying seedlings to establish a plot containing 500 trees. In 2006 the seedlings were planted, but all of them were destroyed by fire. For both Piso Forum and FACE, the community indicated that they don't see many activities being done by these organizations and described them as being non-functional.

LEADERSHIP AND DECISION MAKING

The key authority in the community is the Town Chief who is assisted by a deputy, a secretary and an overseer. In addition, the head of the women's group, the Imam and a Dean Elder provide advice to the town chief. The head of the youth group can also sit on a forum concerned with decision-making. All matters dealing with the welfare of Sembehun and its residents, are handled by the town chief, and his elders/advisors. If problems exist in the community that cannot be handled by the Town Chief (TC), it is passed over to the General Town Chief (GTC) who has responsibility for Tombei Chiefdom (which comprises Lower Tombei and Upper Tombei). The GTC is responsible for Latia, Sembehun and Torso.

Generally, decision-making moves in hierarchy from the TC to GTC to CC (Clan Chief) to PC (Paramount Chief). If an individual or group attempts to by-pass the hierarchical decision-making chain (because of status or financial influence), measures can be taken to prevent it from being so. For example, we were informed that some people were at one time involved in a fight in Sembehun and they bypassed the authorities of the GTC and CC and went straight to the PC to settle the dispute. The GTC went to the PC and recalled the case, and was granted the permission by the PC. Beyond the PC, all matters go to the Superintendent and Circuit Court. In the case of a land dispute, when the issue reaches the PC, the Land Commissioner can be asked to sit on the matter.

LAND AND RESOURCE TENURE

Sembehum has a land area of 7,000 acres that was surveyed and deeded in 1969. This land was acquired through the ancestors, while a small portion was given by the people of a certain quarter from Latia as a gift when they gave a daughter of theirs to chief Momoh Kaikai of Sembehum to marry. In addition to the land given, live fish and animals were also released in the stream and forests of Sembehun to multiply so as to feed their daughter and her future children. In 1980-1984, someone came to Latia and wanted to acquire land for development, which necessitated a resurvey in 1984 of the land belonging to Sembehun.

In the past (1920-1930), when population was low, the entire Sembehun territory was divided into six quarters, and anyone wanting to cultivate land sought permission from the head of that quarter where he lived before clearing the land. In the 1950s, use rights to the land used for farming lasted for three years for a person who was first to clear the said piece of land, after which, it went back to everyone living in that community. After the 3 years, it was still possible to engage the land, but anyone else could go and engage the land even in different quarters. Between 1930-1950 when the population started building up, the quarter system was abandoned and replaced by a combined communal system.

In a case where cash crops are planted on a piece of land by members of the community, the crops belong to the one who planted them while the land is the common property of the community. This means any development for which the said land is deemed suitable the crops can be negotiated for to give way to community development.

Outsiders are also allowed to use community land, but have to go through negotiations with the community leadership including the town chief, elders and sometimes the rest of the community members. When negotiations are finalized, such persons are advised not to plant any permanent crops and when harvest is over, his temporary tenure rights are also over. The initial timeframe for outsiders is one year and limited to the cultivation of cassava and rice. Permanent crops are not allowed, but if one has stayed in the community for an appreciable length of time, they become members and their rights to land follow the same as the rest of the community members.

Sacred Groves

The traditional sacred institutions like *poro* and *sande*, which are organized around forests, were at one time dominant in socio-cultural life, although the *sande* is the only such organization now in existence. The *poro* was eliminated in 1981 as a result of the military coup that brought President Samuel Doe into office, and the promulgation of a decree by his government banning any bush schools (e.g, *poro*) or other associations. Most individuals believed this was done to prevent any insurgence activities against the then fledgling government. Islam and western education have also helped to extinguish *poro*, as Sembehun is a predominantly Moslem community. In the past, the *poro* initiates spent a minimum of four years in the sacred grove, which was later seen as a deterrent to western style education. It also covered several communities and settlements, and therefore created embarrassments for non-members and females who were in the region at the time the *poro* was in existence.

Most sacred groves of the *poro* society are associated with forests, with strong oversight by its members. Exploitation of its forest resources for commercial purposes is strongly prohibited through taboos and sanctions, and it was known that the *poro*'s influence extended through the social, political and economic life of the community. This situation is no longer evident, as the predominant Moslem population has no place for such an association.

NATURAL RESOURCES AND FOREST-BASED LIVELIHOODS

The landscape of Sembehun could be effectively divided into five ecosystem types including mountain rainforest, freshwater swamp forest dominated by *Raphia* and *Symphonia*, coastal savannah dominated by *Parinari macrophylla* and *Elaeis guineensis*, and mangrove forest. Abundant water resources also occur, including the Atlantic Ocean, lakes (including Lake Piso), creeks and lagoons.

Although there is a high dependence on agriculture for subsistence (especially rice cultivation) as well as income generation (production of gari from cassava), forests and associated resources are very critical in the lives of the community members. Exploitation of the forests (rainforest, mangrove and savannah) for bushmeat, timber, firewood, charcoal, fish and ecotourism was evident in the community, although the significance of these resources in the lives of the community members was downplayed.

The forest located on the steep slopes overlooking Lake Piso and the Atlantic Ocean, has an abundance of *Parinari excelsa*, a tree that produces fruits that is locally consumed and sometimes also sold in the markets. However, we found no evidence of harvesting the fruits for consumption or sale in the market, as large amounts were found scattered on the forest floor. It is also a very important food source for monkeys and chimpanzees, which also occur in the forest. The tree is also important for charcoal making and as firewood. Another important fruit tree that occurs in the forest is "bitter kola" (*Garcinia kola*) that appears to be harvested on a minimal scale for home consumption. Sometimes the surplus sold for income generation. It is an important NTFP and frequently observed being sold in the markets of Monrovia and other bigger towns in the country, although it appears much of this might be imports from other West African countries. *Pentadesma butyracea* is also common in the forest but there was no processing of the seeds to produce eligible oil. However, the poles are termite resistant, and also exploited for construction work.

Although we did not see any large-scale fish-smoking activity in Sembehun, the production of gari requires the use of firewood or charcoal, most of which comes from the forest and to a lesser extent from the mangrove and farm bushes. Large-scale smoking of fish is common in nearby Robertsport, and informants in Sembehun indicated that a boatload of fuelwood is often taken to Robertsport and sold at L$1,200. *Parinari excelsa* (forest species), *Rhizophora* and *Avicinia* (mangrove species) and *Parinari macrophylla* (savannah species) are important fuelwood and charcoal sources and are common in Sembehun. It was reported by informants that, in the past, the mangrove was heavily harvested to supply wood for fish smoking in Robertsport, but a halt was put to this through an environmental NGO called FACE. Although harvesting has been severely curtailed, our field assessment found a small section of the mangrove being harvested and this was reported to have been done by woodcutters mostly from Robertsport to meet demands from fish smokers. Other sources of income include charcoal and fuel wood. Charcoal and firewood can be harvested from the mangrove as well as the forest. A bag of charcoal is sold for L$110-125. Fuelwood is harvested, transported and sold in Robertsport for L$600 per canoe full.

Two species of trees common in the freshwater swamp forests around Sembehun include *Symphonia globulifera* and *Raphia palma-pinus*, but these are currently not exploited on any large scale or commercial purposes. In the past, piassava was harvested from *Raphia* and sold to Lebanese merchants in Robertsport for export purposes, but it is believed that trade in the product declined when the Lebanese merchants left Robertsport, and possibly better substitutes were found on the world market. *Raphia* also produces palm wine, but most residents of Sembehun are Moslems and therefore do not tap it. *Symphonia* was reported by one key informant to have been harvested recently for use in erecting light poles in Robertsport.

Logging of the forest using chainsaws was reported to have been started in Sembehun in 1998 by a community member. Anyone interested in this activity (be they outsiders or residents) will only be allowed access to the forest through permission granted by the local authorities which includes the chief, the Development Chairman and elders. Once an individual has negotiated with the local authorities, s/he is granted access to start logging and would be asked to pay twelve planks for every hundred planks produced. Twelve planks are handed over to the Development Chairman who receives them on behalf of the community. It was emphasized that allowing pit-sawyers in the forests sometimes provide temporary jobs for some community members, especially in the areas of tree spotting and transportation of the planks from the forest to the road.

The diverse landscapes in Sembehun provide great opportunities for forest and water ecotourism. None of these activities is currently taking place, although a signboard has been planted in the hope that it will attract tourists to stop by and visit the beach, lake and forest and help boost local incomes. The community lacks money to facilitate this. Some person initially invested some money in clearing a site around the beach, but the conditions offered, which included buying and leasing of twenty acres was not agreeable to the community and so the negotiations fell apart. The person wanted to buy five acres and lease fifteen acres, but the custom of not selling land prevented the agreement from going through. During consultations at the community level, the members jointly agreed not to sell the land, but were open to leasing so that they could have long-term benefits. Since then investors have shied away and the community is looking for other investors especially a company. The unique location, diversity of landscapes and its accessibility within the proposed Lake Piso PA system has potential for ecotourism ventures if properly marketed.

OTHER LIVELIHOOD ACTIVITIES

Between 1930 and 1950, Sembehum had a very strong economy. The production of cocoa, coffee and palm kernel was high, backed by the harvesting and marketing of *Raphia* to Lebanese merchants who resided in Robertsport. A coffee mill was available in Sembehum for primary processing before marketing. It is believed that part of the *Raphia* was used to produce gunpowder during the Second World War and was therefore in high demand with higher price. Income earned from the cultivation and sale of these products was invested in housing construction in Sembehum, as evident by the many concrete structures (although some are now in need of repairs).

Following the end of World War II, the demand for piassava (from *Raphia*) declined abruptly. On the other hand, the cocoa started dying slowly, followed by the coffee. This continued until both the cocoa and coffee disappeared completely. The cause was not really known then, although three major factors were attributed to:

- Salt concentration in the crops exceeded what could be tolerated,

- Slaves who maintained farms could no longer do so because slave trade had been abolished, and

- Changing soil conditions from sandy loam to sandy soil marked the beginning of the breakdown of the local economy of Sembehum as very few crops could be cultivated in the sand.

Presently, cassava, rice and vegetables are grown, but the main source of cash income is cassava through the production of gari (also known as farina). This crop is planted at different times of the year. It starts from April to May on flat sandy soil, while June to July is reserved for cultivation on the mountain slopes. The main variety planted is Bofani, a Vai word that means, "depend on me".

Cassava cultivated in Sembehun is processed in several ways for consumption and marketing. It can be peeled, cooked and eaten or a starchy food product called "dum-boy" prepared from it; it can be dried and pounded into cassava flour called "dee-par"; can be peeled, fermented in water for three days and pounded to produce fufu; finally, it can be grated and put under pressure for 2-3 days to reduce water content to produce gari. Among these, the gari is the most preferred because of its economic value.

According to some female farmers interviewed, two bags of raw cassava produces one bag of gari. Gari can be produced throughout the year, but production is limited during the farming/rainy season, at which time the price per bag increases. In 1994-95, gari was sold at three cups for L$5, but now it is sold at two cups for L$15. During the farming season when rice is scarce, a cup of gari can be sold for L$10. The current farm gate price is between L$1,100-1,200 per bag, but it is sold in Monrovia at L$2,000. Middlemen are involved in the purchase and marketing of gari. They help to reduce the burden of transportation and other expenditure on the farmers.

Fufu is next to gari in terms of providing cash income for the people in Sembehun. A medium size plastic bag full is sold at L$100.

The numerous creeks, lagoons and lakes provide fish for home consumption and some income earning opportunities. The lakes and lagoons are home to some threatened aquatic wildlife such as crocodile, water deer and turtles, which are also trapped or hunted.

SEMBEHUN AND THE PROPOSED LAKE PISO PROTECTED AREA

Sembehun community and its associated landscape are located within the proposed Lake Piso PA system. In our initial reconnaissance in the surrounding communities, it was rumored by some community elders that they had been informed by some FDA individuals that once the Lake Piso PA system is enacted into law, they would be asked to move. Similar issues were raised at Sembehun, but the community members indicated that they own their land and forest. This is a source of potential conflict.

Sembehun: A perfect example of a multi-use landscape. [Photo: A. Lebbie]

Chapter 5

Garpu Town

INTRODUCTION

Garpu Town is located in Rivercess County, some 280 km from Monrovia on the road leading through Buchanan. It is largely a forested community with large areas of the landscape still in primary rainforest. However, logging for timber has been extensively done in the past (Oriental Timber Company) as well as in the present time (through illegal chainsaw activities). Large areas of logged forest still exist side by side with primary rainforest as the dominant vegetation type. The logged forest is very rich in rattan, but little or no exploitation of it is done for commercial purposes. The community of Garpu Town is largely dependent on the forest for NTFPs such as construction materials, medicinal plants and bushmeat, as well as artesinal mining for gold. The forest is also rich in biodiversity with elephants known to roam the forests (both logged and primary).

HISTORICAL BACKGROUND AND DESCRIPTION OF COMMUNITY

It is believed that Zennoh, the great grandfather of Garpu, originated from the north-eastern part of Liberia. He migrated to Rivercess as a result of a tribal war in the eighteenth century. The first settlement was Daydanewein near Porkpeh Town where Teah was born. Within this same settlement, Teah gave birth to Yargbo. As a grown up, Yargbo migrated from Daydanewein to establish his own village called Kayah. In Kayah, Garsaynee was fathered by Yargbo in the nineteenth Century. In Kayah, Garsaynee grew up to father Garpu who later became a sub-chief. Because of the inaccessibility of Kayah by road, Garpu decided to move onto the main road, establishing a village now called Garpu Town. This happened during President Arthur Barclay's administration, which was between 1904 and 1912.

Population

Before the war, the estimated population was around 250, but the current population is 340 comprising of 127 male and 113 female. The dominant ethnic group is Bassa (97%), with Kpelleh (2%) and Kru (1%) constituting the minority groups.

Education

The only educational institution in the town is Dorbor Public School, founded in 1985 using the community town hall. In 1987, a mud and thatch shelter was constructed and was in use up to 2003 when the community fled from the civil war. Following the return of the community in 2004, a new school was constructed and opened to the public in 2005. The school covers only the elementary level, and has a total enrollment of 202 students (120 male and 82 females). This school serves the nearby communities as well. There are five teachers, four males and one female. Only one of the teachers is on

government payroll and the rest are volunteers. The volunteering teachers are often compensated by the parents by contributing their labor to make a farm for them. The school lacks basic furniture and supplies.

Facilities and Employment Opportunities

Currently 56 shelters exist in Garpu Town, with 54 of these made out of mud and thatch for dwelling purposes, and two (the community *palava* hut and the school) being the only structures with zinc roofing. During the civil war Garpu Town was burnt down by rebel forces (MODEL[11]). After the war, reconstruction was facilitated by the Red Cross through food for work. There were twenty-two shelters before the war.

A clinic (Dorbor Clinic), founded in the 2000 in Garpu Town using a shelter provided by one of the community, served the health care needs of several communities. In 2006, the clinic was transferred to Porkor, a nearby town, to ensure that there was equal distribution of facilities in the chiefdom, as Garpu Town already had a school. It was constructed through community initiative using local materials (thatch, round poles and rafters). There are five staff (one female and four males). Originally there were six staff but the OIC (Officer-in-Charge) died in 2007 and has not been replaced, leading to a non-functioning clinic. Prior to the death of the OIC, the staff were paid by MERLIN (a health care NGO). Presently the five staff are paid by the Ministry of Health (MOH), albeit infrequently. Replacement of the OIC to head the clinic remains the main constraint. Community members are now more dependent on the use of herbal medicine from the surrounding forest/bushes for their health needs.

There is no hand pump, well or toilet in the community and most people use the bushes to defecate. Water needs are met from nearby streams. A Church exists, called Pillars of Fire, as the community is predominantly Christian.

Garpu Town is still accessible by road, although the shortest route is currently not functional due to a damaged bridge. Most people are now using the long route through the former logging road constructed by OTC and currently used by illegal chainsaw operators. But part of this road for a distance of approximately 9 km from the logging road needs to be cleared, as it is now very bushy. Motor bikes sometimes use the shorter route. Mobile telecommunication is absent, and radio reception from Monrovia to the community is poor except for UNMIL, BBC and LAC radio stations.

Self-employment, especially through the cultivation of the land and harvesting of natural resources such as bushmeat, pit-sawing and gold mining provides income for most residents. Four staff from the clinic and one teacher from the school are paid by the Government of Liberia.

Social Condition of Women

The social condition of women in Garpu Town is one of extreme difficulty, especially when it comes to attending to basic household chores involving the use of water. Informants reported walking for 25-30 minutes to fetch water for drinking and other uses.

[11] One of the warring factions during Liberia's civil conflict.

The lack of bathhouses means that most women bathe in open places behind houses and often feel insecure about this. Some women reported carrying goods on their heads to the market covering distances of approximately 4-5 hours walk.

Problems and constraints
Several problems were indicated by informants ranging from the deplorable road conditions, to the unfilled position of senior medical personnel at the clinic. Basic drugs for use in the clinic are absent and most people are reliant on their traditional healers to assist with basic as well as complex health issues. Basic water/sanitation facilities such as toilets, bathhouses and wells/hand pumps are lacking in the community and most people go to the bushes for defecation or to the streams to fetch drinking water. There is also growing dissatisfaction about the lack of disbursement of revenue collected from pit-sawing activities. Several informants indicated to us that since the inception of pit-sawing activities, revenue generated from tolls paid by truckers and pit-sawyers has been kept by a committee appointed by the citizens of the district, who have refused to disburse funds for community development activities requested by the community. Reported social conditions during various presidential administrations are presented in Table 2.

Table 2: Social Conditions During Various Presidential Administrations in Garpu Town

Social Condition	**Tolbert 1970-1980**	**Doe 1980-1990**	**Taylor 1990-2002**	**Johnson-Sirleaf 2007-present**
Health	Poor	Good	Bad	Better
Education	Poor	Good	Bad	Fair
Water & Sanitation	Poor	Poor	Poor	Poor
Road	Fair	Poor	Good	Fair
Shelter	Poor	Poor	Poor	Poor

Community Organizations
A number of community organizations exist in Garpu Town.

- *DENSAYNA* (means "Nothing stays like that forever"). This group was launched as a result of the war and operates under the Dorbor Clan. The main roles are to receive strangers, welcome them and accommodate them; also to engage in agricultural activities such as cassava and rice farming. It was expressed by the members of the group, that proceeds from cultivating the cassava and processing into fufu and gari would result in them expanding cultivation of the farm for the following year. They are seeking help in the form of machinery to expand farm to three acres.

- There is a *youth group* with no formal name. The group claims to be mainly concerned with "road brushing". In fact the road leading to the village was very bushy and we saw little evidence of wood brushing. The group indicated that they were involved in providing labor for the construction of the school and clinic. It is an all male group and was started in 2003.

- *ARBEGNUTAA*, which means "Be fair to one another, be transparent" is a group for both men and women and they are engaged in farming, advocacy and self-help. The group was formed by SDI (Sustainable Development Institute), a local NGO operating in Liberia. There was no evidence that the group was still functioning.

- *The Concerned Citizens Caucus of Rivercess* was felt by team members to be not actually operational in the community per se, but its leader was in attendance at the community meeting we organized and so tried to slot in the group's mission. The main objectives of the group concern human rights, advocacy, self-help initiatives, cassava farming, and reconditioning of the road.

- The *Teachers Association* aims to carry out cassava farming for the school, and to give assistance to community in farming activities. Again we felt this group was not functional and the teachers tried to slot in this group to seek help.

LEADERSHIP AND DECISION MAKING

The town chief (TC) is the primary source of authority, assisted by a deputy town chief, town crier and a secretary, forming the primary core of leadership. They are in turn assisted by elders, youth and women leaders for any major decision-making. Beyond the territorial confines of Garpu Town, matters are referred by the TC to the Unification Town Chief (UTC) who has responsibility for all the chiefs in the Dorbor Clan, of which Garpu Town is a member. If the crime exceeds the law of the community (Garpu Town), then it is sent to the next higher authority. From the UTC, community matters are referred to the Clan Chief (CC). It is from the CC that issues are directed to the PC (Paramount Chief) who is responsible for 3 clans (Dorbor, Dowein and Siahn). The chiefdom is therefore known as Dorbor-Dowein-Siahn Chiefdom. Currently, the PC is resident in Garpu Town.

From the PC, important matters are referred to the District Commissioner (DC) before they are forwarded to the Statutory District Suprintendent (SDS). From the SDS to the County Superintendent (CS) and to the Land Commission, especially when land disputes are involved. In a situation where someone refuses to respect the authority of the TC, the PC will intervene and discipline the offender, since the PC is resident in the same community as the TC (Garpu Town).

The UTC existed as far back as Tubman period (1944-1971). The SDS was not present during President Doe's Time (1980-1990) and only came into being during Gyude Bryant's caretaker government of 2004-2005.

LAND TENURE AND RESOURCE TENURE

Rivercess County is a forest region, and so is Garpu Town, and existing tenure regimes have evolved to take into account the primary rights of the individual who firsts clears the land taking considering the investment of physical strength and ability. Once you are a resident and the first person to open up the high forest through farming, you retain the

primary right to the use of that land and such rights can last for 5-10 years before anyone can request for use of it if it is not in production. There is no need for permission to farm in such sites after the stipulated time has expired. The person who first cleared a site can also plant permanent crops on the land. If, during the first year when the land was cleared, it was properly burnt, the individual can cultivate the land for one season and leave to fallow for several years before returning to it again to farm. If on the other hand the land was not properly burnt during the first clearing, it can be re-cleared and re-farmed for the next season, most often by the same person, because of the ease of clearance the second time around compared to clearing a primary rainforest.

Outsiders wanting to settle in Garpu Town and start cultivating land have to first seek approval from the authorities through a resident local referred to as a "stranger father". Following a background investigation of the individual that reveals no issues of concern, the laws of the community are introduced to the individual who is welcomed into the community farming system. This allows the person to cultivate permanent crops.

Rice, cassava, pumpkin, plantain, pepper, corn and cucumber are the main food crops grown on the upland. Swamp rice farming is not done. There are swamps but lack of knowledge about swamp farming has made people pay little attention to it. However, informants indicated that they would be interested to do so if knowledge about swamp farming is shared with them. Thatch, rafters and rattans are the predominant forest products used in construction work and it is a breach of law if they are harvested and not used. Penalty results in payment according to quantity wasted.

Sacred Groves

There are sacred institutions for both male and female organized around forests in Garpu Town. The *sande* (for women) is still strong in Garpu Town, while the *poro* (for men) has declined in significance largely due to the influence of Christianity and the political situation in the past that made it illegal for such associations. However, in Garpu Town, there is another sacred institution called *nigi* organized around a river in the forest. This appears to be organized with the purpose of conducting sacred rituals. The site is venerated by both men and women and it is forbidden to fish or hunt in the vicinity of the grove.

NATURAL RESOURCES AND LIVELIHOODS

Rainforest is the dominant landscape feature in Garpu Town, and it can be further categorized into primary rainforest, logged forest and secondary forest. Freshwater swamp forests are few, with occasional areas of farm bush and cocoa plantations. The rainforest provides a wealth of forest resources including bushmeat, bitter kola (*Garcinina kola)*, bush pepper (*Piper guineensis*), walnut, wild yam (*Dioscorea sp*.), medicinal plants (diverse range of species), thatch (*Elaeis guineensis, Raphia palma-pinus* and *Raphia hookeri*), rafters and round poles (*Xylopia aethiopica* and *Harungana madagascariensis*), and timber (diverse species) exploited in the community. Gold mining is also practiced in the forest by a large number of migrants from other counties, as well as a few locals. With the exception of bushmeat, most NTFPs are harvested and

used within the community, as poor road networks limit transportation to distant market sites like Buchanan. Rattans are abundant in the logged forests and are used mostly in the production of chairs, winnows, baskets, tables and sold in the local markets with prices varying from L$75 to L$150.

Both residents of the community and outsiders are involved in the collection of these products. No rules governing access were observed or reported. Bushmeat and gold are the major sources of income. For bushmeat, in the past animals were caught using spear and pit-fall traps, and used mostly for home consumption. Now commercial hunting is done by using traps and shotguns. The main animals hunted are duikers, monkeys and bush hogs. The meat is dried and sold between L$700 to L$1,500 depending on size. Middlemen are also involved in purchasing and selling of meat at a higher rate outside the community.

Pit-sawing activities are rampant in the vicinity of Garpu Town, and although seen by the government forestry authorities as illegal, the activity has been allowed to go on. For every chainsaw operating in the forest, the community receives registration fees from the operators. The activity provides temporary jobs for community members although the bulk of those involved are outsiders mostly from Monrovia as well as foreigners. The community also charges a fee of L$8,000 for every truckload of timber leaving the community. The proper disbursement of this money at the community/county level has been a major source of conflict, with community members complaining that they have not received a single benefit they started collecting the toll from drivers.

Initially Garpu Town was collecting its own toll, but the county authorities felt that they should also be part of the benefit sharing. Eventually they set up a system of toll collection which was more or less centralized. Political interference and misappropriation of funds were common to the extent that now no pit-sawing is going on in the county and no revenue is being collected, as it has been banned as logging concessions are now being planned by the FDA.

Medicinal Plants/Traditional Medicine

Traditional knowledge associated with plant use for treating certain illnesses was found to be common place among the populace, although some people were found to be custodians of such specialized knowledge. Even children between the ages of 6-10 knew at least a plant or two and its associated uses. We found most of the elderly women ready to share their knowledge of plants with us, with most of these women also associated with the *sande* society. The rich rainforest harbors a wealth of plant species and we found specialized use of certain plant species for medicinal purposes hitherto unrecorded in the traditional folklore. This wealth of knowledge would be critical to preserve.

An extensive range of medicinal plants were identified by informants (see Table 3).

Table 3: Medicinal Plants of Garpu Town

Medicinal Plant (local names)	**Uses**
Zarlehye	Worms
Kluaslah	Asthma
Wheh	Snake bike
Balahba kweneh	Pneumonia
Herhewe	Mental illness
Korto bobo	Gonorrhoea
Summon chue	Hook worms
Deleh chue	Paralysis
Flahn chue	Open wounds
Kla chue	Heikor
Klor	Goyah, swollen body
Teteh	Vomiting
Yawili	Cough
Koojah	Leprosy
Meyan	Glaucoma
Yahn	Severe eye pain with redness

Gold Mining

Gold mining started in the community during President Tubman's (1940s-1960s) administration but became intensive in 1996 during the civil war. It was indicated that some miners operate using licenses issued by the government Ministry of Lands and Mines while others are illicit miners. The community authority does not appear to be involved in any decision making in the mining activities. Prior to the war, a gram of gold sold for L$250. At present, a gram of gold sells for L$1,000-1,200. Most people involved in the mining of gold are outsiders as most community members are not knowledgeable about gold mining. Middlemen are the main buyers of gold but have to register with a gold broker union in the amount of L$1,500. Gold diggers are mostly youths from Monrovia and have established camps in the middle of the forest, both logged and primary.

OTHER LIVELIHOOD ACTIVITIES

Cassava is produced for home consumption while a small quantity is marketed. It can be processed into gari, fufu, "dee-per" (dried cassava) and "dumboy". Gari is sold at L$10 per cup during April to November while it is sold at two cups for L$15 during December to March.

Rice is produced for home consumption and sometimes sold to meet financial needs. A bag of husk rice is sold at L$1,350 at present but was sold at L$750 prior to the war. Clean rice is sold at L$25 per cup at present but was sold at L$10 prior to the war.

Plantain/Banana: This was not valuable before the war and was sold at L$25-30 per bunch, but it now costs L$100-150 per bunch.

Pepper: A cup of dried pepper is sold at L$35 while a bag is sold at L$5,250.

Cocoa grows well but only a few cocoa farmers are found in the community. Some cocoa growing communities are inaccessible by road and products cannot get to the market. Presently a bucket of cocoa is sold at L$450 unlike I the past when it was sold at L$250. Because of the high demand for rubber and associated marketing structures, some cocoa growers are thinking of converting the cocoa farms into rubber farms.

SOCIAL AND ENVIRONMENTAL CHANGES

Even though the slash-and-burn farming started quite some time ago, it did not have any significant impact on the forest due to low population density. The current increase in population due to the influx of a diverse group of people seeking gold, timber and bushmeat has led to increased pressure being brought to bear on the forest and associated natural resources. The hunting and trapping of wildlife for bushmeat is rampant (by both locals and outsiders), and there is an increased presence of pit-sawyers conducting selective logging especially in previously logged forests. Most residents were concerned about the increased exploitation of their forests, but have allowed these activities to go on for economic gains now, because past exploitation of their resources especially through commercial logging brought little or no socio-economic benefits. Socio-economic conditions have changed little with little or no improvement in basic facilities like water, health and sanitation.

Chapter 6

Goll's Town

INTRODUCTION

Located within Margibi County some forty-five minutes drive from Monrovia, Goll's Town is a small community in close proximity to the Firestone Rubber Company. Only a small area of forest exists and this is owned and managed by the community. Much of the landscape is covered with rubber plantations and those in close proximity to the community are old and are now being replaced and the old trees converted into charcoal. Most of the rubber produced is sold directly to the Firestone Rubber Company. The rubber plants are individually owned on private land.

HISTORICAL BACKROUND AND DESCRIPTION OF COMMUNITY

The founder of Goll's town originally lived in Korweleh Town, one of the villages that fell victim to the expansion of Firestone rubber plantation in the early 1900s. The expansion program forced many villagers out of their own settlement and their areas taken over by the company. Mr. Goll was one of such victims. When he left Korweleh Town, he settled along with his family in Gbeh Town where his brother, Tarkorzue lived. While in Gbeh Town, present day Goll's Town was used as a farming site by "Old man Goll". Between 1928-30, he finally migrated from Gbeh Town along with his family and established his own village called Goll's Town.

Goll's Town is located in Mabahn-Kaba District of the Garneo Clan in Margibi County. The district is divided into two chiefdoms- Mabahn and Kaba, each with a Paramount chief. The district headquarter is Civil Compound within reach of Goll's Town.

There are six separate clans within the district, These are: Gearh, Kpah (which makes up the Kaba chiefdom), Garneo, Zoaduahn, Kafia, and Dosue (which makes up the Mabahn chiefdom). Each clan is controlled by a clan chief, with a general town chief responsible for all of the six clans.

Population

Prior to the war, the population of Goll's Town was higher, and the size of the village was also bigger as evident by the remains of old shelter foundations, even though the exact figure is not known by the present community members. The current population is 286 (181 males and 105 females). There are nine different ethnic groups found in Goll's Town, but 88% belong to the Bassa.

Facilities and Employment Opportunities

There are only two public facilities in the community- a church (Baptist) and one hand pump, which functions only in the wet season. Facilities such as toilets, bath shelters, school and clinic are lacking (toilets were constructed by an NGO, but once it got filled

they have been no new construction). There are several school-age children in the community, but none of them attending school, because the only school available is about two hours walk away.

The only health center in close proximity of Goll's Town is at the Firestone Health facility located at Dussa which caters largely to the company's workforce. Non-company workers have difficulty accessing the health facility, and pay a non-refundable gate fee of US$25 before entry into the health center premises. Additional monies are required to pay for actual treatment of such patients. Emergency cases from Goll's Town are transported in hammocks to the main road or to the hospital and fatalities are not uncommon before patients get to the health center.

Road access is fair from the edge of the Firestone plantation especially during the dry season, but parts of it get muddy during the wet season, making it impossible for vehicles to get through. This keeps Goll's Town isolated during the wet season. Telecommunication signals in the area are weak to poor. There is no employment opportunity in the community and everyone ekes out a living from forest resources or seasonally moving back to Monrovia to work and return when they have earned enough to get them through.

District Development Committee
The District Development Committee was established in June 2007 through elections conducted by UNDP among the district inhabitants. Officers elected were trained by UNDP to spearhead or work along with NGOs and the national government in time of project implementation within the district. The DDC is also charged with the responsibility of writing and submitting project proposals to the county authority for consideration. DDC members are direct representatives of their district at county level.
Constraints faced by the new DDC include the following:

- County authorities do not recognize the DDC's existence

- County authorities implement projects without the involvement of DDC members. For example; the construction of the administrative building and school (ongoing) at the Civil Compound did not involve any consultations with them.

- Projects proposed by the DDC are often turned down by the county authorities. For example; hand pump, clinic, latrine and school projects were proposed for the Mabahn-Kaba District, but turned down by the county administration. Efforts to inquire about DDC isolation by the county authorities have proven fruitless.

LEADERSHIP AND DECISION MAKING

The Town Chief maintains overall control over the affairs of the community assisted by a council comprising of elders who serve as advisors; The Assistant Town Chief; the Secretary; the Female Leader; the Youth Leader and the Overseer comprise the immediate source of leadership in the community. The female leader supervises the

women and responsible for preparing food for the youths in time of community work. The youth leader heads the youth and helps in mobilizing the youth for community work.

The youth render voluntary services to community members in time of construction of shelter, and transporting sick persons during emergencies using hammocks to the nearest hospital. The Overseer supervises community work such as community cleaning, and road side brushing. He also makes sure that penalties (L$150) levied against those who fail to attend to community work are paid. Administrative and community issues that cannot be handled by the Town Chief and his council are referred to the General Town Chief (GTC). In general, decision-making and conflict resolution follow the following order:

TC → GTC → CC → PC → DC → S
[TC is Town Chief; GTC is General Town Chief; CC is Clan Chief; PC is Paramount Chief; DC is District Commissioner; S is Superintendent]

Land disputes arising between community members are handled by the TC and elders. If it is between residents of Goll's Town and another neighboring community, elders from both towns including the TC settle it. If not settled at this level, it is taken to the GTC following the above schematic flow until the dispute is settled. Cases from the Town Chief are transferred to the Clan Chief through the General Town Chief. The GTC does not preside over cases. However, no land case has ever gone to court between community members, and between communities and outsiders.

In 1989, however, a land dispute erupted between the people of Fawein Town and Goll's Town for felling a *Ceiba pentandra* tree, which was on the border side of Goll's Town. The people of Fawein Town felt that their land was trespassed and wanted revenge. This case was settled by the TC and elders from both Goll's Town and Fawein Town.

LAND TENURE AND LAND USE

Goll's Town has a land area largely covered in farm bush, old rubber plantations and old secondary forests. Territorial boundaries are shared with several villages including Senzon, Lekpah, Dangbor and Civil Compound. According to our informants, land belonging to Goll's Town has been surveyed and deeded, but they do not know the total acreage.

The system of land ownership is "ommunal, but mixed with specific arrangements for temporary individual "ownership" of land. Every citizen of Goll's Town can farm in any part of the forest provided the person was the first to engage the site. On the other hand, some form of private ownership to land exists, and takes the form where a long duration crop is cultivated. If the crop is an annual crop, the farmer's entitlement to land occupied by the crops is one year. In the case of long duration crops such as rubber, cocoa and oil palm, the farmer owns the land as long as the crops exist.

Outsiders who intend to farm in Goll's Town or extract forest products, have to go through negotiations with the authorities in the community and seek their approval. This also applies to Goll's Town citizens who want to do similar activities outside their own settlement.

The slash and burn method of farming is the only method widely used in the community. Prior to the war, the forest was under pressure as a result of increase in population. Farming was done in many parts of the forest, but has now drastically reduced and the forest is regenerating. The reason for this is that many of the inhabitants who fled from the war have yet to return. In fact, there were four satellite villages within the Goll's Town area before the war, but two have been completely abandoned and now reduced to rubbles. The bulk of the villagers have established themselves in Monrovia while some are working with the Firestone Company, and return occasionally to check on things or attend to important issues in their community.

Apart from old rubber trees that are out of production, no one is allowed to cut down forest trees for charcoal production; no one sells round poles and *Raphia*, and extraction by community members is restricted largely to construction purposes; no one is allowed to fell palm trees, except when they reach beyond climbing limit; *Raphia* harvesting is prohibited in some parts of the forest to allow multiplication. Most members of the community serve as police to monitor the activities of others in such a situation. If infractions occur and are reported to the chief, fines are imposed. An overseer, who reports to the chief, is responsible for collecting such fines.

Sacred Groves
The community has two secret societies (*poro* and *sande*), each organized around forests. Non-members are not allowed to enter the sacred groves and no individual is allowed to cut trees in the sacred groves. In the past *poro* practices were more common among the community members, but they now dying slowly due to lack of interest. Many people, both young and old, are turning to the Christian religion as evident by the construction of a church.

NATURAL RESOURCES AND LIVELIHOODS

Even though Goll's Town did not exist until the establishment of Firestone, the family who built this village survived on farming, hunting of wildlife, and gathering and marketing of palm kernels. Palm kernel was transported on head to the Farmington River and sold to merchants in boats. In some cases the kernel was transported on head to Buchanan before marketing. Farm products such as rice, cassava and vegetables were used for family consumption. Currently, the community survives on agricultural activities, particularly rubber production and the conversion of the old trees into charcoal. Common resources used are:

- *Charcoal:* The exploitation of old rubber trees to make charcoal was first introduced in Goll's Town in 2008 by a man who was involved in charcoal burning in the Firestone plantation using old rubber trees given out by the company to cut and give

way for replanting. Following the end of the cutting exercise, this man migrated from Firestone and settled in Goll's Town where he is currently carrying on large-scale charcoal production using old rubber plantation trees in need of replacement. At present, many of the community members are also engaged in charcoal production for sale. A bag of charcoal is sold between L$100-125, with middlemen frequenting the community to buy in bulk and sell for profit.

- *Rattan:* The exact quantity of this is not known, but it is found growing in specific forest regions of Goll's Town. Because there are few people actually engaged in craft production, they can collect rattan from any part of the land without reporting to anyone as long as they are residents. Rattan is used in local construction work and in the production of crafts and furniture such as winnows, chairs, tables, etc. Chairs are the main products that are in high demand. The price varies with size. The smaller size is sold at L$40; the medium for L$80 and the large size for L$150. Middlemen are also involved in the purchase and marketing of rattan chairs. They buy and sell the products outside of the community at higher prices (ranging from L$50 for small; L$125 for medium and L$225 for large). According to our Informant, production of rattan chairs is higher during the dry season, but lower during the wet season. However, the prices for the finished products appear to remain stable. Two chair producers are found in the community and one of them has trained two other boys to produce chairs.

- *Round Poles and Rafters:* These are found in abundance, but are mainly used for local construction. Marketing of these products is strictly prohibited. These products are available on an open access basis for residents.

- *Raphia Palm:* This is also available in some parts of the forest on an open access basis for residents. The thatch is used for roofing while wine is produced from the tree. Wine is not a major market product, but is sold occasionally at L$100 for one gallon container.

- *Timber:* Production started as far back as 1927-30 as a result of introduction of pit sawing by Firestone. Firestone Management used the locals to saw timber for the construction of their camps, but they received very low wages. After some time pit-sawing came to a halt until 2003 when some chainsaw operators from outside the community reintroduced it. Out of 100 planks produced, fifteen pieces are given to the community. The pit-sawing activity was halted in the same year, because the fifteen planks given to the community were bought by the same pit-sawyers at considerably lower price, and this did not go down well with the community members.

- *Wildlife and Fish:* Some animals available in the forest include duikers, bush cow, monkey, bush hog (which is getting rare), and are hunted or trapped for home consumption. There are few creeks from which fishing is done. Some of the fish often caught are catfish, crawfish, and tilapia. No access rules were identified.

AGRICULTURE AND OTHER LIVELIHOODS

Rubber

A good number of the community members have their own rubber farms on which they survive. Yet, there are some without farms who engage in contract tapping. The proceeds are equally shared between the contractor and the farm owner. Coagulated rubber is transported to Firestone Company when farmers contact the company and ask for a car to collect the product. For every ton of rubber transported, a fee of US$15 is charged by the company authorities. Other expenditures incurred by the farmer includes compensation fee for the driver (US$15) and security fee (US$10) (even though Firestone management is not aware of this and does not authorize it). A ton of rubber is sold at US$1,300 during the wet season when production falls due to rains. On the contrary, the price of rubber drops during the dry season when production increases.

Agricultural Crops

Crops such as cassava, rice and vegetables are grown, but cassava is the most dominant. It can be prepared into "dumboy" which is the major food in the community. Gari and fufu production is very limited and not for commercial purposes as in the case of Sembehum. After the war, rice farming came close to a halt in Goll's Town due to lack of farm inputs such as tools, seeds, etc., but it is now picking up gradually. Vegetable production has just been introduced into the community and is seen as promising by a small group of people engaged in it.

Cocoa is cultivated but a only few trees are found at the edge of the town on the road leading to Senzon. These trees are growing very well, but are not being maintained or efforts made to expand. The reason given was that most farmers are only exposed to rubber farming and don't know how to properly cultivate cocoa.

SOCIAL AND ENVIRONMENTAL CHANGES

Table 4 summarizes socio-economic and environmental changes that have occurred in the Goll's Town. The timeframe follows the administrative periods of the presidents of Liberia.

Table 4: Changes in Goll's Town in Various Presidential Administrations

Changing Factor	**Presidential Administrative Timeframe**				
	Tubman 1960s	**Tolbert 1970s**	**Doe 1980s**	**Taylor 1990s**	**Sirleaf 2000**
Land use	Swidden	Swidden	Swidden	Swidden	Swidden
Environmental	Forest intact	Forest intact	Farming	Farming	Charcoal making
Economy	Better	Better	Better	Bad	Fair
School	None	None	None	None	None
Clinic	None	None	None	None	None
Toilet	None	None	None	None	1 (full)
Hand pump	None	None	None	None	One

Chapter 7

Kilima Bendu

INTRODUCTION

Kilima Bendu (Lofa County) is located in North Western Liberia and shares international boundaries with Guinea and Sierra Leone. It is approximately 289 miles from Monrovia on the road passing through Voinjama. The predominant vegetation and forest type is Guinean savannah dominated by the grass *Panicum maximum*, with scattered savannah trees like *Hymenocardia sp*., *Parkia biglobosa* and *Lophira lanceolata* that are fire resistant. Fires are a common feature in this forest type, but control measures by the community have served to control its effect. Although the fire management system collapsed during the war, it has been recently rejuvenated. This unique forest type and local management of fire regimes was one of the key reasons for selecting Kilima Bendu as a case study landscape with traditional management of natural resources.

HISTORICAL BACKGROUND AND DESCRIPTION OF COMMUNITY

The exact year of establishment of Kilima Bendu was not known by informants, but was believed to be around President Charles D.B. King's administration (1920-1930). This town was built by a great warrior, Saah Shewah who migrated from a town in Guinea called Wonda Kenema. From Guinea, Shewah first settled in Yeagbehmah in Sierra Leone and later moved to live with his brother, Fayah Kaiyendia in Kondalo, a border town in Liberia. After some time, Saah Shewah left to establish his own village, which he named Klima Bendu, after his style of fighting. "Keli" is a Kissi dialect meaning cut off or get rid of quickly while "Bendu" means big.

The feeling of loneliness in the new home led Saah Shewah to go back to Guinea in search of his younger brother, Fayiah Kpako to get him to come and live with him in Liberia. In Liberia, Fayah Kpako fathered a son called Fayiah Famah, and Famah fathered Tamba Famah, the current Zone chief in Kilima Bendu.

Education
A Town Hall constructed in 2008 is used for adult literacy programs, but besides that no educational institution exists to cater for children. However, there are two schools located in nearby communities: Medicorma Public School takes 30 to 45 minutes to reach, and Ndopa Community School is about two limometers from Kilima Bendu.

Population
Prior to the war, the population was higher than at present. Some of those who fled from the war have still not returned, and others have left for other countries. The current population is around 575 distributed among 233 males and 342 females. The adult population stands around 245 and there are 330 children between the ages of 0-15. The

population is predominantly of the Kissi tribe (572 people) and there are three Mende people. There are forty-two shelters. Twenty-two of these have zinc roofing and twenty are made of thatch roof.

Facilities and Employment Opportunities
There are no schools or clinics, but other facilities exist. A hand pump was constructed in 2006 by an NGO (Peace Wind Japan), but it runs dry in the dry season when the water table goes down. The same NGO constructed five pit latrines with local materials and labor provided by the community. A Town Hall constructed through community initiatives in 2008 addresses adult literacy. A church, Spiritual Life International, is the only formal religious institution.

Kilima Bendu is accessible by road which leads to major markets in Foyah and Koindu, in Liberia and Sierra Leone, respectively. But current political tension between Sierra Leone and Guinea has seen a drop in vehicles plying the route. Mobile and radio reception are poor or absent.

Apart from two instructors hired by GTZ under the Adult Literacy Program who receive regular salaries, most other individuals depend on income derived from cultivating the land and making use of other natural resources.

Community Organizations
Five organizations are found within the town. These are:

The 7-man Committee: This was organized in 2007 by GTZ. It is responsible for identifying community needs and writing project proposals to the DDC (District Development Committee) who channels same to NGOs or Government. The committee once submitted a proposal to the DDC for onward submission to ADRA and Peace Wind Japan, but did not succeed.

The Loan Management Committee: This was also established by GTZ in 2007 with the intent to create petty business in the community. Four groups with a membership of 15 were formed and subsequently trained by GTZ. Among these, five persons received extra additional training, capacitating them as trainers and loan managers. In March of 2007, the first group of sixty persons received US $50 each from GTZ, equivalent at that time to L$2,500. This money was paid back to the loan committee in six months time with an interest of L$250. This amount is being revolved in the community and a total number of 195 persons have benefited from this program. The program also assisted in the construction of a town hall. The program is still in operation.

Youth: Members of the youth group are engaged in cassava farming and contracting their services for money. Money earned is given out as credit to members and with interest to sustain the organization. The youth also help with community cleaning, road side brushing, and construction of structures, both public and private.

Ndopa Farmers Cooperative: This consists of five towns with 62 members. The towns are Kilima Bendu, Medicorma, Woudou, Kondu and Konjo. A registration fee of L$150 is paid by each member and is used to buy seed rice. The rice is given out to farmers as credit (one bag is repaid with two bags).

The District Development Committee (DDC): This was founded by UNDP in 2005, and exists at the district level and there is an individual from Kilima Bendu who represents the community on this committee. Its main aim is to lobby for projects and to work along with NGOs or Government in undertaking all development projects within the district. It also helps to channel proposals from the communities to NGOs or Government.

LEADERSHIP AND DECISION-MAKING

Kilima Bendu is headed by a Town Chief (TC), assisted by the youth leader who serves as Assistant Town Chief. Other decision makers include the elders, secretary and the female leader. This council presides over civil cases at village level. Land disputes that are not criminal in nature can also be handled at the village level, but with the involvement of the three main families who head the territorial land of Kilima Bendu (see under Land Tenure). If the case is between Kilima Bendu and another community, it is settled by the elders and chiefs of the affected communities. For example, in 2007, a land case erupted between Kilima Bendu and Medicorma. The dispute was resolved by chiefs and elders from both communities. On the other hand, cases that are not settled at town level are transferred to higher authorities (from TC to Zone Chief (ZC) to Sectional Chief (SC) to Clan Chief (CC) to Paramount Chief (PC) to District Commissioner (DC) to Superintendent (S) as depicted below:

TC → SC → CC →PC → DC → S

LAND TENURE AND RESOURCE USE

The land of Kilima Bendu is not deeded, but boundaries with neighboring communities are known. The land is divided among three main family groups (lineages) that make up the population of the town (the Minimonur, Tourlah and Sembianor), who are responsible for the supervision and distribution of land among their respective family members and residents in their ward. The land is essentially the common property of each lineage, with individual agricultural plots allocated from this. Trespassing is completely forbidden. Site selection for farming is regulated by the family heads in order to allow the bush to fallow and also to familiarize the future generation with their respective ancestral lands.

Outsiders are only allowed to plant short duration crops, but have to negotiate with any of the family heads with the involvement of the town chief. Under this arrangement, the farmer is required to pay back a bag of seed rice to the family head whose land was used. Community members can only use resources outside of their territory through negotiations.

The land of Kilima Bendu was believed to have been largely forested in the past, but shifting cultivation and other practices have changed the land to savannah. In the 1980s LPMC (Liberia Produce Marketing Company) introduced oil-palm cultivation using bull-dozers to clear large parts of the forest. Initially rice was planted in the area and later palm was planted after the rice was harvested. The plantation was shared among family heads by LPMC. The number of acres allocated to a family varied with the number of dependents in the family. The larger the family members, the more share they got. When the farm was turned over to the community, it could not be fully maintained due to lack of tools. Consequently, 80-90% of the palm was destroyed by animals and fire. There are still few scattered ones that are harvested along with wild palm.

NATURAL RESOURCES AND LIVELIHOODS

The dominant forest type in Kilima Bendu is Guinean Savannah, dominated by scattered trees such a *Hymenocarida acida, Lophira lanceolata, Parkia* and *Spondias mombin*. These trees are fire resistant, and the seasonal burning either due to wild fires or stray fires from clearing fields, have played a dominant role in maintaining the Guinean savannah. Small areas of swamp forest exists with tree species reminiscent of lowland freshwater swamp forests including *Hallea stipulosa, Raphia palma-pinu*s and *Ceiba pentandra*. Occasional groves of cocoa exist in moist areas of the savannah especially around freshwater swamps, where small forest trees provide shades to aid in the growth of the plants. The most common type of wild animals used are grasscutters (*Thrynonomys swinderianus*), which are also seen as major threats to agricultural crops. They are very common in savannah environments.

The dominant forest resource of the savannah on which the communities are dependent is grass, which is used widely in roofing as well as for making fences to prevent animal pests from destroying crops. No apparent access restriction on its exploitation was noted. Around the freshwater swamps, which are important rice cultivation areas and under family ownership, access limitations exist on the exploitation of fronds from Raphia palms for roofing.

Basic community rules have existed in Kilima Bendu to ensure natural resources are well protected and the livelihoods of the rest of the community members are guaranteed. For example, in the past, there was a fairly robust traditional fire control system to prevent the spread of fire in the savannah. During the war, the system appeared to have collapsed, as youths with guns had no respect for traditions and deliberately set fires to the savannah to prevent rebels from hiding there. However, the system appears to be resilient as the community has began enforcing fire control measures once more. Open fires are now forbidden between 10 AM and 4 PM in the town during the height of the dry season. In addition, willful felling of trees by individuals is not allowed and could lead to fines. Moreover, the felling of palm trees in the community is not allowed.

Medicinal Plants and Usage

There appears to be a great reliance on medicinal plant usage in Kilima Bendu and a good number of the elderly persons in the community are custodians of knowledge about these plants. Table 5 lists the medicinal plants identified by informants.

Table 5: Medicinal Plants of Kilima Bendu

Plants	**Used for**
Wamgo	tooth ache
Kunlundo	used to bathe babies, makes them stronger
Lunelay	tooth ache
Lorture	chigger
Marqueyo	stomach pain
Shambolo	snake bite
Meolo	roots used for de-worming
Kpafula	dysentery
Tehvoe	urinary tract infection
Nyangar	cutlass wound
Pay-yaryah	heart trouble

Because of the limited abundance and diversity of forest resources, agricultural activities involving rice, oil palm and vegetable production appear to be the main livelihood strategy. Rice is cultivated for both home consumption and income generation, and this is done in the savannah as well as in the inland freshwater swamps. Oil palm is harvested largely from the wild (fire destroyed much of the plantations) and is seen as a major source of income. Vegetable production has been encouraged in the community by an NGO (Samaritan Purse), but this stopped because money ran out. Cocoa and coffee were once grown, but much of what remains today are old trees and many farms have become shaded due to the fourteen years of civil conflict.

Middlemen are also involved in the purchase of some of the products especially cocoa and coffee where they make on average a profit of around 30-40%. Cocoa is sold outside of Kilima Bendu at L$120/kg, while coffee is sold for L$150/kg.

SOCIO-ECONOMIC AND ENVIRONMENTAL CHANGES

Table 6 presents a summary of changes in social, economic and environmental conditions in Kilima Bendu based on the administrative regimes of some Liberian Presidents.

Table 6: Changes in Kilima Bendu by Presidential Administrations

Changing Factor	**Presidential Administrative Timeframe**			
	Tolbert 1970s	**Doe 1980s**	**Taylor 1990s**	**Sirleaf 2000**
Land use	Good	Good	Poor	Fair
Fire Management	Good	Good	Poor	Fair
Education	Poor	Poor	Poor	Poor
Health	Poor	Poor	Poor	Poor
Road	Good	Good	Good	Good
Housing	Poor	Fair	Poor	Good
Economy	Good	Good	Poor	fair

Chapter 8

Zaewordamai

INTRODUCTION

Zaewordamai is located in the Voinjama District of Lofa County, some 120 miles from Monrovia and has a mix of secondary forest and plantations of coffee and cocoa. Much of the plantation is in need of rehabilitation as the civil war led to abandonment of these plantations. Different species of rattan occur in the forests and together with timber, wild palms for oil and forest spices, constitute the major products extracted from the forest. There is a strong adherence to traditional practices such as the *sande* and *poro*, which are organized around sacred groves.

HISTORICAL BACKGROUND AND DESCRIPTION OF COMMUNITY

Zawordamai is a very old town and our informants indicated to us that they don't remember when it was first established. According to our key informant (a man believed to be the oldest in the town), the founders of Zawordamai, were three warriors (Akoi Bibily, Vu, and Dodo) who migrated from the Mali Empire. Tribal war drove these warriors from Massadou, a town in Mali. They migrated to Liberia and settled across the Makona River in a village called Aworzu. Thereafter, they moved to Bakpaymai, the original town from which Zawordmai was derived.

In later years, tribal war also broke out in Liberia in which Vu was a key player. He fought several battles, promising his people that until his wrist got tired, his town would never be conquered. However, Vu got killed in one of the wars he fought. In order to remember this hero, the town Zawordamai, meaning "hold my wrist", was named after Vu's style of fighting.

Population

The population of Zawordamai before the war is not known, but it was higher than present as is evidenced by the number of old house spots. The current population is 981 with at least nine ethnic groups living in 129 houses, with 96% of them belonging to the Lorma tribe.

Every citizen of Zawordamai fled from the war and sought refuge in neighboring countries. Thus, the whole population consists of returnees. Nevertheless, community rules are still maintained and adhered to by people despite everyone being a returnee. For example, everybody takes part in all community development work such as road-side brushing, town cleaning, etc, which was found not to be the case in other counties.

Facilities and Employment Opportunities

The community is located away from the main road leading from Voinjama to Foyah, but nonetheless accessible by road, although the road is used moslty by motorbikes as few

cars make it to the town. Mobile communication through Libercell and Comium are possible but it is difficult to get through most of the time. Facilities available in the community include:

School: The school was established in the 1950s and named Zawordamai Fundamental Education with classes up to the fourth grade. In 1976, the school was elevated to the level of grade six and was renamed Zawordamai Elementary School. Another elevation took place in 1979 bringing the school to the current junior high level, with a name change to Zawordamai Elementary and Junior High School. Current enrollment is 364 students (153 females and 211 males), with fifteen teachers (two women and thirteen men). Four of these teachers are paid by the Government of Liberia while the rest are compensated by the community.

Hand pump: Only one hand pump is available, and this creates a lot of pressure for the entire population of the town, as too many people have to wait in line to fill their containers.

Latrines: Twenty-one pits were dug under the supervision of IRC, but slabs provided were under-sized for the pits and could not be used. The open pits are still visible, leaving the community with no usable toilets at the moment.

Town hall: One was built by an NGO called CHF with community contribution (labor and local materials).

Guest house: There is a guest house under construction by the women of the community. Each woman contributed L$500 to begin the project.

Clinic: This was established by an individual in 1981, but it was not opened to the public because the founder died upon completion of the building. In June 2008, it was renovated by the Catholic Diocese of Gbarnga and now in full use. It has eight staff including a physician assistant, three nurses, one nurse aide, one trained Traditional Birth Attendant, a security guard and a cleaner.

Churches: Three churches exist in the community (Assembly of God, Baptist and Aladura).

The school and the clinic are the two main sources of formal employment, while the International Committee of the Red Cross (ICRC), contracts laborers from the community for tree crop rehabilitation. However, the majority of the community members are self-employed and engaged mostly in rice cultivation and exploitation of natural resources for income purposes.

LEADERSHIP AND DECISION-MAKING

The Town Chief (TC) heads the town along with his team of co-workers. These include the elders and the chairlady who serve as advisors to the TC. Other decision makers include the assistant town chief, secretary, youth leader and the town crier.

The town is divided into four quarters: Kolliemai, Sayanwalamai, Kpodomai and Kessellemai. The four quarters are grouped into two sections for administrative purposes, with Kpodomai and Kolliemai under one sub-chief., and Sayanwalamai and Kessellmai controlled by another sub-chief. The two sub-chiefs are also members of the decision making body.

LAND TENURE AND LAND USE

The land of Zawordamai is not deeded, but boundaries with surrounding towns are known. The land use system is communal, but divided among the four quarters in accordance with ancestral rights. That is, families only farm in areas owned by their ancestors. Trespassing is not allowed, and heads of families need to be consulted first before anyone attempts to cultivate any piece of land not owned by them. Within each family, individuals are allowed to plant cash crops of their choice on land allocated to them. For development purposes, any citizen engaged in rice farming is expected to pay five bundles of rice to the town.

Outsiders are also allowed to farm based on arrangements with the family that owns the land. The outsider also pays five bundles of rice to the town if he/she is a Liberian. For other nationalities, the fee paid to the town is one bag of seed rice.

In the past, outsiders were allowed to plant both short and long term crops such as cocoa, coffee and oil palm, but this arrangement is no longer allowed. The reason being that, this gesture once sparked up a serious conflict in Zawordmai between the Lorma and the Mandingoes. A piece of land was offered to a Mandingo man wherein he planted cocoa and wanted to expand the farm towards the grove that is used for sacred and religious activities. This was against the traditional norms of the community, thus, resulting in conflict between the two tribes (Lorma and Mandingo).

Settlement of Land Disputes

Land disputes are settled in different ways according to gravity. If it is between two separate family groups, it is usually settled by the elders of the two families. If none of the families could settle the dispute, it is shifted to the town chief and his council. The matter is shifted to the higher echelon of decision-making if the town chief and his council are unable to resolve the issue, by involving the sectional chiefs, clan chiefs, paramount chief and upward to the superintendent. For example, in 1979, a serious land dispute between the Mandingo and the Lorma was resolved by the then Superintendent of Lofa County after going through all of the traditional dispute resolving mechanism involving the local chiefs.

NATURAL RESOURCES AND LIVELIHOODS

Natural forests in various stages of succession are common, including secondary forest, freshwater swamp forest, farm bush, cocoa and coffee plantations and riparian forests, and each of these forest types offers a diversity of forest products. There are no specific rules to govern the use of the forest resources. However, there are three traditional sacred sites, each with a good portion of forest where traditional practices are carried out. Farming is not permitted in any of the sacred groves, which include, the men's *poro* society forest, the *sande* for women and the grove for traditional sacrifices. Every year, a sacrifice is made for peace, prosperity and increase in food production in one of these groves. This ritual is performed mainly by men, and during this period, non-members of the *poro* society are not allowed to venture around the sacred grove until the festival is over.

The range of forest products extracted and used for income generation as well as for household use includes:

- *Rattan:* Considerable quantity and diversity exist in some parts of the forest and used for chair making, construction, broom, and many more. There is no market for these products, thereby discouraging the community from processing rattan. According to our informant, there are about 3-4 types of rattan available. They include the smallest rattan known as zabbigali (Lorma dialect), the white soft rattan called galuwiligi, the medium size used as climber, also called balikai, and a big type.

- *Round poles/rafters:* These are harvested and used for construction in the community and are readily available.

- *Raphia:* Used to produce wine while the leaves are used for roofing. A gallon of wine is sold at L$50 in the community.

- *Bushmeat:* This is harvested using traps or guns. However, commercial hunting is not rampant as in the case of Garpu Town in Rivercess County. Some of the animals available are different types of duikers, bush hog, bush cow, ground hog, crocodiles (locally referred to as alligators), etc.

- *Wild palm:* This serves as another source of income. A 5-gallon container is sold at L$1,100 farm gate price. This drops to L$400.-500 during peak production period (March-May).

- *Forest Spices:* Xylopia aethiopica seeds and that of Piper guineensis are also harvested and marketed. A bag is sold at L$1500-2000 in the community, but higher prices are fetched outside the community.

- *Water:* There are two rivers, Zaliba and Yayah along with a few creeks. The two rivers are used for fishing, sand and rock mining for construction. We were also informed that animals such as two types of crocodiles are found in the Zaliba River.

With the exception of Raphia used for commercial wine production, all of these products are available on an open access basis for community members, with no rules or restrictions.

PIT-SAWING

This activity started long ago. Pit-sawyers get permit from the county authority before going into the area for sawing activities. For every 100 planks sawn, twenty-five go to the community as benefit. The trees used are generally on agricultural land or trees in cocoa plantations. In addition to this, the person/family on whose land the log was sawn also receives benefit from the pit-sawyer. This is not specific, but negotiable between the two parties.

OTHER LIVELIHOOD ACTIVITIES

Mining
Mining was started between 1960-70 by some Guinean immigrants, but they left and did not return. In 2008, some of the Guineans who had started this initiative sent a few persons back to prospect for diamonds at the old mining site. These people along with some individuals from Zawordamai started prospecting in the area without the awareness of the town authority. They were stopped by the town chief and elders and subsequently fined L$500 each. This was paid and deposited into the community development account.

Economic Strength of Zawordamai –Past and Present
Prior to the war, the community had a very strong economy as evident by the numerous houses with metallic zinc structures, coupled with concrete graves of dead relatives. Zawordamai is noted for growing rice, cocoa, coffee, kola nuts and sugarcane. Apart from rice and sugar cane, seedlings of cocoa, coffee and kola nuts were raised by the Lofa County Agricultural Development Program (LCADP) and distributed freely to farmers. Zawordamai was one of the communities that took advantage of this program and planted by a large number of people in the community as evident by the large number of cocoa and coffee farms.

Unfortunately, the fourteen year civil conflict caused the farms to be abandoned and they are now being overtaken by the forest, exacerbated by the black pod disease of cocoa. This has greatly affected the economy, although efforts are now underway through the International Community of the Red Cross (ICRC) to rehabilitate the cocoa farms. ICRC is currently recruiting a local workforce and providing tools such as cutlasses, axes, metal files, and food to undertake the rehabilitation. For every one hectare of plantation rehabilitated, ICRC pays a labor cost of L$3600 to the workers. About 250 farmers have so far benefited from this program.

Table 7 Indicates prices of some agricultural commodities in Zawaordamai

Table 7:Prices of Some Agricultural Commodities in Liberian Dollars

Crop	**Post-war price (L$)**
Cocoa	40/kg
Coffee	50/kg
Rice	40/kg
Palm oil	1,100/5 gallons
Palm kernel	25/kg
Kola	100/kg

SOCIO-ECONOMIC AND ENVIRONMENTAL CHANGES

With the exception of communication and health, most factors changes have tended to decline, especially land use, roads and the local economy as depicted in Table 8.

Table 8: Changes at Zawordamai over Time

Changing Factor	**Presidential Administrative Timeframe**			
	Tolbert 1970s	**Doe 1980s**	**Taylor 1990s**	**Sirleaf 2000**
Land use & Environment	Good	Good	Poor	Fair
Road	Better	Better	Poor	Fair
Communication	Poor	Poor	Fair	Fair
Housing	Good	Good	Fair	Fair
Local Economy	Good	Good	Poor	Fair
Health	Poor	Poor	Poor	Good
Education	Good	Good	Good	Good

Chapter 9

Gohn's Town

INTRODUCTION

Gohn's Town is located in Grand Bassa County approximately 65 miles from Monrovia. Access to the site is extremely difficult during the rainy season. Some area of good rainforest still exists, but increasing dependence on slash and burn agriculture is creating a mix of vegetation types including farm bush, secondary forest and plantations dominated by rubber. This diversity in the landscape provides a range of forest products including rattan, medicinal plants, bitter kola, bushmeat and fish. There is still strong adherence to traditional sacred institutions like the *poro* and *sande*, with the *poro* known to play an important role in resolving conflicts over land use.

HISTORICAL BACKGROUND AND COMMUNITY DESCRIPTION

According to an informant (the oldest man in the community), it is believed that Gohn's Town was established during the administration of the late President Daniel E. Howard (1914-1915). The town was built by two brothers, Boune and Yealear, both of whom hunted elephants and traded in ivory. They migrated from Glehyee Zorpea, a Mano town in Nimba County in search of elephants. The two brothers first settled in a village called Gbeal in Grand Bassa in District Number 2, where Gohn's Town is located and its surrounding forests comprise the area where elephant hunting took place.

The two hunters killed two elephants in separate locations and decided to return to Gbeal to inform their hosts about their success. The two men lost their way and found themselves in Gbassay (previously in Grand Bassa County, but now Margibi County), but were directed by the people of Gbassay to Gbeal. Later, the two hunters returned to the dead elephants and constructed one tent each at the sites where the animals lay. Boune, the eldest brother built his in an area now called Gohn's Town while Yealar built his in the place now known as Boeh's Town.

Boune later married a Bassa woman who bore him a son and was named Gohn, meaning "man", and "big thing" in the Mano and Bassa dialect, respectively. Boune's village was later named Gohn's Town after his first son. The current National Traditional Chairman, Chief Zanzan Karwor is one of the descendants of Gohn's family.

Gohn's Town was seriously disrupted by the civil war. In 2003, the rebel forces of MODEL burnt down Gohn's Town, causing the community to flee. They later returned to re-build the community. Significantly, community rules are still fully maintained.

Population:
The prewar population is not known but current population is approximately 172 persons, consisting of 87 males and 85 females. This population currently resides in forty-nine

shelters including forty-three with thatch roof and six with zinc roof. There are five ethnic groups in the community, but the dominant group is Bassa, comprising approximately 96% of the population.

Facilities and Employment Opportunities
The road leading to Gohn's Town is in deplorable condition, with several of the log bridges needing replacement. Along some sections of the road, there are no bridges and vehicles have to wade through creeks to get back on the main road. Mobile telecommunication is absent.

There is a water pump, which was constructed by an NGO, but which goes dry during the height of the dry season. There is a two-compartment latrine constructed by Chief Zanzan Karwor with the help of the community. The same chief is helping to construct a clinic, to replace the one that was destroyed during the civil war. There is no school. However, there is a church (Christ Assembly) constructed in 2000.

One blacksmith shop built before the war exists and is used to produce local farm tools such as cutlasses, hoes, knives, etc. These tools are sold in the town and the surrounding villages at different prices depending on size. The larger size cutlass is sold at L$150, the medium and small at L$100 and L$75, respectively. Knives are sold at between L$5-20 depending on size as well.

Employment opportunities through a formal sector are absent. Most people are self-employed through the exploitation of the land and its natural resources. The leader of all traditional chiefs in Liberia resides in Gohn's Town, and provides employment opportunities for some residents on a contract basis to work on his farm.

Community Organizations
Poro and *Sande* societies continue to exist and are strong in Gohn's Town. They are frequently used to enforce community rules and regulations. For example, fighting, stealing and insulting in public are not allowed. Violators are penalized by the *poro* and the *sande*, depending on the sex of the offender. There are two separate forests (sacred groves) set aside for the *poro* and *sande*. No one is allowed to farm in and around these sacred forests.

In addition to the secret societies, there are five organizations found in the town. These are:

- *Female Rice Susu Group:* This consists of twenty-three members who collect two cups of rice per person per day for seven days. The total (322 cups) is given to a member weekly and this is rotated until everyone benefits.

- *Six-Woman Financial Susu:* A due of L$200 is paid weekly by each member, giving a total of $1200. This amount is paid to a member on a rotational basis until each one receives their share.

- *Kuu:* Currently comprises fifty members, both men and women who work on one another's farm rotationally. The host feeds the group during the working hours. Membership of this group is not stable, and is largely considered voluntary.

- *The Rice Harvesters' Group:* Consists of men and women who come together during rice harvest season. They go from one member's farm to another, with each person contributing one cup of rice for feeding. The host provides the sauce for the food.

- *Gohn's Town Defenders*: This is the youth football club consisting of boys and girls with a total membership of thirty. The club is basically engaged in sporting activities. However, it also helps in maintaining roads, community cleaning and construction of public facilities.

LEADERSHIP AND DECISION-MAKING

The Town Chief (TC), his co-workers and the elders are the decision makers of the town. Cases that cannot be handled by the TC are transferred to the council of elders with the involvement of the *poro* that has a final say on critical issues. Women also employ a similar method (through the *sande* society) in cases that cannot be amicably resolved among them or by the TC.

Gohn's Town is one of the twelve major towns within the Karblee clan in Jeabolo Chiefdom in District Number 2. In addition to the twelve towns, there are twenty-four satellite villages, making up a total of thirty-six towns under the Karblee clan. Each clan is controlled by a clan chief and a general town chief (GTC) who works under the supervision of the clan chief (CC). Cases from the town level are transferred in an ascending order to the GTC, through the CC, and the Paramount Chief (PC), until settled at the appropriate level. See this flow in the diagram below:

TC → GTC → CC → PC →

LAND TENURE AND LAND USE

The land tenure system is similar to Goll's Town and Sembehum, where members of the community are free to farm in any part of the community land. However, areas planted with cash crops like cocoa and coffee, become the private property of the person who planted the said crops. Outsiders are allowed to plant short and long term crops based on arrangements with the community through the host of the said outsider. No cost is attached to the land offered, except general contribution of two cups of rice, which is paid annually by all farmers towards community development projects.

Members of Gohn's Town are also allowed to farm outside of their land, but have to go through similar arrangement with the authorities in other communities. However, in the case of Gohn's Town and Boeh's Town, land is freely used between them without any

major form of arrangement. The reason for this is that Boeh's Town has a filial relationship with Gohn's Town, both of which were established by two brothers.

Land conflicts are settled in two ways, depending on gravity. If a case is not criminal in nature, and is between community members, it is taken care of by the Town Chief, his immediate council and elders. Sometimes the *poro* society is involved in the final settlement of a dispute if the TC is unable to resolve the issue. Land conflicts arising between two or more towns within the Karblee clan are forwarded to the senior elder of the 12 major towns, who presides over such issues along with his council of elders within the clan. At some point, the *poro* is also involved in the resolution process. If the council fails, the case is forwarded to the higher government authorities.

NATURAL RESOURCES AND LIVELIHOODS

Mature forest, mixed with secondary, farm bush, freshwater swamp forest and rubber plantations are common, providing a diverse range of forest products. Animal protein is also acquired from the forests through trapping and hunting. Other important non-timber forest products exploited in this community include rattan, medicinal plants and bitter kola as indicated below:

- *Rattan:* There is an abundance of rattan in the community, and this is harvested and processed into chairs, winnows, tables, baskets, etc. These products are sold at different prices as shown in the chart below.

- *Bushmeat:* Different types of animals such as duikers, monkeys, grass cutters, etc are hunted and sold raw or smoked. The price varies according to size. However, hunting in Gohn's Town is not as rampant as in Garpu Town where commercial hunting is done.

- *Wood Carving:* Collected from Gohn's Town and the surrounding villages and sold to middle buyers at varying prices.

- *Round poles and rafters*: There is an abundance of these resources and they are harvested for construction work within the community.

- *Raphia:* Some parts used for making mats and some for roofing. In fact, well over 95% of the community structures are roofed with thatch from Raphia, and there is an abundance of it in the community.

- *Bitter kola and walnut:* These are collected for consumption while at the same time small quantities are marketed to supplement household incomes.

- *Fish:* The Farmington River and a few creeks are available in which fishing is done to meet nutritional needs.

Table 9 shows some of the prices at which natural products are sold in the community.

Table 9: Prices for some natural products

Commodity	Small	Large
Rattan chair (single)	L$50	L$75
Rattan chair (set)	L$1000	L$1500
Bushmeat (4 quarters)	L$600-800	L$1000-1500
Carved wood	L$100	L$125

Note: "Middlemen" are involved in the trade in some of these products.

There are no rules or restrictions applying to any of these products.

An extensive variety of medicinal plants was identified by informants at Gohn's Town (see Table 10).

Table 10: Medicinal plants in Gohn's Town

Plants (Bassa dialect names)	**Use**
Pleene	Increasing female fertility
Teanway	Snake bite
Teanway	Strengthens penis erection
Zargabloiva	Normalises heart beat
Neeblazeh	To treat heart trouble
Beanchu	Cough medicine for infants
Coechu	Cough medicine for adults
Nenfoahn	Helps extract thorns
Neowiliu	Stomach pain
Wheneto-hueh	Treatment for malaria
Kplemachu	Dysentery
Bolekpe	Treatment for bloody diarrhea
Yeleyuklehn	Tooth ache
Gbayan	Treats swellings of the body
Boinwuhua	Rat poison
Bueeye (Zanthoxylum sp.)	Tooth ache
Dohm	Treatment for jaundice
Doeheh	Laxative
Zeaboea (Manniophytum fulvum	Treat cataracts
Waah	Combined with Kplaboea, Nenmuein and Kortubo to treat rheumatism

AGRICULTURE AND OTHER LIVELIHOODS

In addition to the exploitation of forests for a diversity of products, agriculture is practiced by almost everyone in the community to meet household needs as well as supplement incomes. The range of crops cultivated include:

- *Rice:* This is the major crop that is grown and used for both consumption and marketing. The pre-war price of rice was L$25 per cup, but is now sold at L$15.

- *Cassava:* also used for consumption and marketing. It can be processed into gari and fufu and sold to the middlemen and sometimes to community members. A bag of gari is sold in the community for L$1000-1200, but sold at higher price outside.

- *Plantain:* This is also grown, but not in large quantities. A bunch of plantain is sold at L$75-200 depending on the size.

- *Vegetables:* (cocoyam, okra, pepper, bitter ball, etc.) are planted along with rice for home use, but some are also marketed to meet family financial needs.

- *Sugar cane:* This once served as a major source of income, but farms and processing mills, distillation pots were all destroyed during the war. However, re-establishment of farms has started with Chief Zanzan taking the lead. One sugar cane crusher and a distillation pot has been bought and is awaiting maturity of the sugar cane before commencing production.

- *Rubber:* This crop was introduced into Gohn's Town after the war and many people are now engaged in establishing more farms to sustain household income when they start producing in seven years time.

SOCIO-ECONOMIC AND ENVIRONMENTAL CHANGE

Table 11 depicts the socio-economic changes that have occurred in the community taking into account timelines from four of Liberia's presidents.

Table 11: Socio-economic Conditions in Gohn's Town during Presidential Administrations

Changing Factor	**Presidential Administrative Timeframe**			
	Tolbert 1970s	**Doe 1980s**	**Taylor 1990s**	**Sirleaf 2000**
Land use	Good	Good	Poor	Fair
Housing	Poor	Good	Poor	Good
Economy	Poor	Good	Fair	Good
Education	Poor	Poor	Poor	Poor
Health	Poor	Poor	Good	Good
Road	Poor	Fair	Good	Good

Chapter 10

Analysis and Conclusions

INTRODUCTION

The seven case studies present a diversity of landscapes with both existing and potential opportunities for diverse forest-based livelihood systems, as numerous products are harvested and sold for income or household consumption. Institutional arrangements have evolved for the management of these products in most of the landscapes studies. However, there was a lack of traditional arrangements for the management of mangrove forests and attendant resources in two of the landscapes. In this chapter, we will summarize some of the diverse ways that the landscapes, and associated natural resources are managed by people based on their cultural and socio-economic context.

Appendix 3 provides a Summary of Forest Categories and Natural Resource Management in all Case Study Landscapes.

FOREST AND TREE BASED INCOMES

The study demonstrates and confirms the fact that rural people in many parts of Liberia rely heavily on a variety of tree and forest and other natural resources and products for their livelihoods. Although this is, in some ways, quite obvious, the nature, variety and scale of forest resource use has not been documented in any detail. Further, understanding of markets for the products has been limited as few studies have been carried out.

A significant part of cash income from most sites comes from forest products (broadly defined – and including products from mangroves). Forest products also contribute to subsistence use (for example foods, utensils, thatch, fruits and medicinal plants). Although the study contains data on prices and some figures on income from particular sources, the actual percentages of cash income derived from forest products and detailed data on incomes have not been quantified. (That will be a subject for separate study.)

A variety of forest products is harvested and sold, or consumed locally. These products include timber, poles, thatch, medicinal plants, fish, kiss meat, rattan, mushroom, fruits, ropes, spices, firewood, charcoal, bushmeat, palm fruits, palm oil, palm wine and snails. This diversity of natural resources upon which individuals can depend helps to reduce risk especially from crop failures. The diversity of natural resources is common in communities with a diversity of forest categories where increased opportunities were available for exploitation. Most of these resources constituted major income sources including kiss meat, poles, fish and thatch.

In Zangar for example, harvesting of kiss meat provides an average income range of US$5-10 per day for a family of two, or between US$100-200 per month in the dry season. In the rainy season (due to scarcity and higher prices), incomes can range between US$123-244 per month. Such income levels are well above the average incomes for most government workers in the country. In Zangar, both young men and women are engaged in the harvesting of kiss meat in addition to other livelihood activities such as harvesting of thatch, fishing and harvesting of crawfish, cultivation and distillation of sugar cane. Together forest and non-forest based livelihood systems can contribute substantially to household income as well as supplementing nutritional requirements. This has potential for poverty reduction, and in conjunction with improved access to markets, people's incomes can be substantially increased.

Potential for Increased Support to Livelihoods and Poverty Reduction Through Natural Resources

Cocoa and coffee have potential in several sites. They have been a source of income in the past, but the resources have degraded, due to the prolonged civil conflict in the 1990s. Most such plantations were taken over by forests and in need of rehabilitation. Redeveloping these industries is potentially an important landscape intervention with poverty reduction potential.

There is clearly potential for forest and tree products (including NTFPs) to contribute to poverty reduction and livelihood improvement beyond the current level. A major area for support would include value addition, improved market access and marketing arrangements such as the setting up of cooperatives, so as to bring increased benefits to rural communities.

It is important to stress that, while the types of products used in various sites vary, there is typically a variety of resources collected. Maintaining a mixed portfolio is a useful way of managing the risks of varying market prices. Overdependence on one product can be very risky.

The study also explored the role of pit-sawing in the case study landscapes. It was found that pit-sawing provides a reasonable source of income for those engaged in the activity either as chainsaw operators or head carriers of sawn planks to loading sites (see also Blackett et al. 2009). In general, financial and in-kind benefits to communities have been substantial but fraught with problems as most community members complained of misappropriation of funds. This may be an important area for future interventions.

CUSTOMARY FOREST MANAGEMENT

Despite common assumptions, many sites maintain customary methods and rules for the management of forest resources, or at least of some forest resources. These customary methods and rules are not always easily visible. Sometimes they consist of organizational arrangements with people having clear roles, but sometimes they consist of established practices based on socially recognized rules and practices, without any visible organization.

Access to natural resources and land by community members follows tenure regimes promulgated by founding ancestors and sustained by current community members in an evolving socio-political landscape. While much of the land in the past was held under a communal system with rights of families clearly recognized, some gradual changes are occurring across most communities due to the evolving political landscape. In a few instances, communities have gone ahead to obtain title deeds to their land from the government, and have continued to regulate access to the land and its natural resources. In other communities, land is still held under a customary system where local authorities continue to assign rights on a temporary timescale depending on the kind of crop cultivated.

In Kilima Bendu, the entire land area is divided among three family heads, who have the responsibility for assigning farming sites and regulating bush fallow and resolving any conflicts. In Garpu Town, an individual who firsts clears a high forest for cultivation retains primary rights to the land for as much as ten years and can plant permanent crops on such land without seeking approval from the community. In Zangar rights to land for cultivation of subsistence crops are temporary, and dissolved upon harvest of such crops like cassava and rice, allowing other members of the community access to use of such lands. In the same community, the communal system of land ownership operates alongside private ownership of land, particularly in the floodplains where sugar cane is cultivated for distillation of alcohol. In such an area, both men and women can own land and are free to dispose of it. Cultivating permanent tree crops on communal land requires an individual to be an indigene or, if an outsider, to have been resident for at least 10-20 years. There were indications that in some instances foreigners or outsiders can be granted the same rights to land as indigenes if a resident ("stranger father") adopts the outsider and agrees to honor any obligations that person might create in the community.

Management arrangements around mangrove resources/marine resources in general appear to be non-existent in two communities (Sembehun and Zangar). Members of the communities and outsiders (especially from adjacent communities) can move in and out and harvest natural resources in these landscapes without being subjected to any restrictions or sanctions. There was a general notion that resources in the mangrove (e.g. kiss meat and fish) are limitless and could not be over-exploited in any way. In Sembehun, proximity to a major fishing port (Robertsport) has led to high demand for mangrove wood for fish smoking, although efforts in the past by environmental groups to limit this have not been sustained, leading to further degradation of the resource. In Zangar on the other hand, the mangrove forest is still in pristine condition, as no smoking of fish occurs in the community, nor the forest utilized for construction materials, as there are abundant resources in nearby forests. Migrant fishermen settling on the beaches of Sembehun and constructing temporary shelters are expected to pay a token amount to the local community authorities.

In some communities, strong institutional arrangements exist for regulating access to natural resources, through an individual, or cultural institutions like the *poro* society. In Zangar for example, a bush manager has been appointed by elders of the *poro* to regulate

access and use of forest resources by community members, especially the harvesting of poles and timber for construction activities. Similar arrangements involving traditional institutions like the *poro* regulating access to natural resources are not unique to Liberia, and are known to have a wide occurrence across the African landscape (Lebbie and Freudenberger 1996). After an individual consults with the bush manager, he determines availability and seeks approval from the elders. Once a verbal approval by the elders is made, the individual is informed of the quantity to harvest. In Goll's Town, harvesting and non-use of forest resources leading to spoilage leads to fines being levied by the chief.

Where scarcity of resources has been observed, there are limits to the harvesting of trees as in the savannah of Kilima Bendu, where tree cover is low. In such a situation, setting of fire is highly regulated to prevent destruction to property and natural vegetation like trees. While this management arrangement was interrupted during the recent civil conflict in the country, it appears to be resilient, as it has resurfaced and now being enforced across the community. Resilience in natural resources management has also been noted in other countries like Senegambia, Guinea and Sierra Leone (Freudenberger et al. 1997).

In cases such as kiss meat in Zangar or mangroves in Sembehun, the absence of regulations and organizational arrangements to manage resources that are perceived to be abundant reflects a common pattern in customary resource management systems generally. In such cases there is no perceived value in incurring substantial transaction costs where there is no perceived shortage.

Tenure over forests and trees is generally a form of common tenure (joint ownership by a specified "community"), with individual access to products for collection subject to regulation. In the case of swidden agriculture, there are various arrangements as to how rights to plots in forests are allocated. Generally there are individual rights to plots within common forests. However, the rules under which plots are allocated vary from place to place. The way decisions are made about allocation, and details such as the length of time plots can be farmed and what crops can be grown vary. Because of the investment of time and resources involved in opening up of mature tropical forests, the first to clear such sites often has unrestricted right for a long period of time and may even chose to invest in tree/permanent crops (e.g. Garpu Town).

There are a variety of different organizational arrangements for decision-making about natural resources:

- Often the town chief has the main authority, or significant authority

- In Kilima Bendu (and previously in Sembehun) the land (including forest land) is divided into "quarters" within the town, and managed by quarter heads (on a lineage basis).

- Sometimes the decision-making is supported by elders

- Overall, the relationship between traditional beliefs and sacred groves was very strong throughout all the case study sites, except in Goll's Town.

- In the case of Zangar an individual has been appointed as bush manager. The person must be a member of the *poro* and is appointed by the elders' council.

CONCLUSIONS

The major purpose of this study was to explore the diversity of resource use systems and customary arrangements for forest management in Liberia. The underlying concern was to show that there is not a "vacuum" of local forest management institutions. In other words arrangements for allocating and distributing forest and other natural resources often exist, and these often vary in different locations.

We were also concerned to explore some of the ways forest and natural resources fit into different livelihood systems in different landscapes.

It is clear from this study that there are customary arrangements for forest and other natural resource management operating in Liberia. The existence of these systems, and the demonstrated variety should inform policy.

We suggest that the variety of resource use practices and management practices has some implications for future interventions in community forestry in Liberia:

- As there are already extensive and sometimes complex patterns of resource use and forest management practices, all interventions should begin with, or be preceded by, assessment of what is already happening in a particular locations.

- As CFM is already practiced, interventions may need to support or strengthen existing practices or they may need to assist in developing new arrangements.

- Standardized "one-size-fits-all" approaches should be avoided and adaptive and flexible learning approaches are necessary for implementation and support of CFM.

- More information like that contained in this report is needed to inform any policy frameworks related to community forest management, building on the rich traditions and knowledge of the rural Liberians and their natural resource management strategies.

The Liberia LLS program has selected two pilot landscapes on the basis of this study and will apply an action research and adaptive approach in these landscapes in order to improve local livelihoods and contribute to an improved understanding of CFM practices as a basis for community forestry policy development in Liberia.

REFERENCES

Alden Wily, Liz (2007)
So Who Owns the Forest: An investigation into forest ownership and customary land rights in Liberia. SDI/FERN.

Blackett, H.A., A. Lebbie and E. Marfo (2009)
Chainsaw logging in Liberia: An Analysis of Chainsaw Logging (Pit-Sawing) in the Natural Forests of Liberia. Towards a More Sustainable Production. Monrovia: Forest Development Authority. Pp 70.

Brown, David (n.d. 2008?)
Prospects for Community Forestry in Liberia: Implementing the National Forest Policy. Sustainable Development Institute. Sustainable Development Institute (SDI)

CIFOR (2005)
Towards a Shared Vision and Action Frame for Community Forestry in Liberia: Proceedings of the First International Workshop on Community Forestry in Liberia. Monrovia 12-15 December 2005. Bogor, Indonesia: Center for International Forestry Research (CIFOR).

Fisher, R.J. (1990)
"Institutional Incompatibility in Community Forestry: The Case of Nepal." In *Community Organizations and Government Bureaucracies in Social Forestry* (Jefferson Fox and R.J. Fisher, editors). Working Paper No 22, Environment and Policy Institute, East-West Center, Honolulu.

Fisher, Robert, Stewart Maginnis, William Jackson, Edmund Barrow and Sally Jeanrenaud (2008)
Linking Conservation and Poverty reduction: Landscapes, People and Power. London: Earthscan.

Freudenberger, M.S., J. Carney and A. R. Lebbie (1997)
"Resiliency and change in common property regimes in West Africa: the case of the Tongo in Senegambia, Guinea and Sierra Leone." *Society and Natural Resources* 10:383-402

Koffa, Samuel N., Dixon Wlehbo, James Kokro and Jonathan Yiah (2005)
Preliminary Assessment of Grassroots Structures of Governance Around Sapo National Park. Flora and Fauna International.

Lebbie, A. R. and M. S. Freudenberger (1996)
"Sacred Groves in Africa: Forest Patches in Transition". In *Forest Patches in Tropical Landscapes*, edited by J. Schelhas and R. Greenberg, pp.300-324. Washington D.C.: Island Press.

Lomax, Tom (2008)
Forest Governance in Liberia: An NGO Perspective. Moreton on Marsh, UK and Brussels: FERN.

Maginnis, S., W. Jackson and N. Dudley (2004)
"Conservation landscapes: Whose landscapes? Whose trade-offs?" In T.O. McShane and M.P. Wells (eds) *Getting Biodiversity Projects toWork: Towards More Effective Conservation and Development.* New York: Columbia University Press.

Sheppard, Donna J., Flomo P. Molubah and Richard S. Sambolah (2009a)
Lake Piso Assessment Report: Community Forestry Survey at Tewor District. Capacity Building and Designing of Community Forestry Pilots: A Natural Carbon Strategy for Liberia. Accra: Nature Conservation Research Centre.

Sheppard, Donna J., Peter G. Mulbah, Michael E. Taire and Dickson Chowolo (2009b)
Wonegizi Assessment Report: Community Forestry Survey at Ziama Clan, Zorzor District. Capacity Building and Designing of Community Forestry Pilots: A Natural Carbon Strategy for Liberia. Accra: Nature Conservation Research Centre.

APPENDIX 1

The Benefits of Community Participation and Involvement of the University of Liberia in the Study

A major impact of the LLS study in the seven landscapes was the collaboration with a staff member and several students from the University of Liberia. Most of the students had never participated in field assessment and most expressed their delight at having acquired practical training in their discipline as well new areas. The grave economic situation of the university precludes students and staff from participating in any practical field work, frequently limiting students to classroom setting. The modest effort in allowing the students to participate in the field exercise was greatly appreciated by the staff member, who indicated that for some twenty years plus, his department had not sent student on field assessment with a practical training component. Following the LLS study, he actually organized a field assessment for students in his department to conduct sociological studies in several communities in Liberia.

Another benefit of the exercise was expressed by community members during the workshop following the assessment, where many of them indicated that the exercise made them to be aware of the value of their natural resources and the potential it has in increasing their income levels. During the participatory mapping and transect work in the forests, most community members came to be aware of the extent of other forest products which they had hitherto not recognized as valuable and potential income sources. For example, Parinari excelsa fruits were abundant in the forests of Sembehun and Zangar, but no exploitation of it occurs. In Sembehun, the community also came to recognize and appreciate the immense natural beauty of their landscape for ecotourism, and indicated that they would do their utmost to develop it.

In both Zangar and Sembehun the assessment and discussions of problems at the community level has led to local initiatives in addressing some of these problems. In Zangar, efforts are underway to construct a well through local participation and contribution, while in Sembehun, a damaged *palava* hut has been repaired.

APPENDIX 2

Comparative Tables Summarizing Aspects of Community Data

Demographics of Case Study Communities

Community	Houses	Population	Females	Males
Zangar	53	223	-	-
Sembehun	-	1038	511	527
Goll's Town	-	286	105	181
Garpu Town	56	340	127	113
Gohn's Town	49	172	85	87
Kilima Bendu	42	575	342	233
Zaewordamai	129	981	-	-

Percentage Composition of Dominant Ethnic Groups in each Community

	Ethnic Groups						
Community	Bassa	Vai	Kpelle	Gbandi	Lorma	Kissi	Mende
Zangar	96						
Sembehun		87					10
Goll's Town	88			3.5			
Garpu Town	97		2				
Gohn's Town	96		2				
Kilima Bendu						99	
Zaewordamai				1.2	96		

Key Infrastructure in Communities

Community	Infrastructure Category						
	Health Post	Pump / Well	Latrine	Electricity	School	Road Access	Phone Calls
Zangar	None	None	None	None	None	Fair	Good
Sembehun	Present	One	One	None	Present	Good	None
Goll's Town	None	One	None	None	None	Fair	Fair
Garpu Town	Present	Two	Three	None	Poor	Poor	None
Gohn's Town	None	One	One	None	None	Poor	None
Kilima Bendu	None	One	One	None	None	Fair	None
Zaewordamai	Present	One	-	None	Present	Fair	None

APPENDIX 3: Summary of Forest Categories and Natural Resource Management in all Case Study Landscapes

Landscape	Forest Category	Natural Resources	Management System	Issues/Comments
Zangar	Secondary Forest	Timber/poles for construction, canoes, thatch, bushmeat, rattan, medicines, ropes, fruits	Common property; bush manager appointed to regulate access and resource exploitation	Forest degrading; system needs strengthening; youth interested in pit-sawing for development and jobs
	Farm Bush	Palm fruit, poles, rattan, fruits, bushmeat, firewood, charcoal	Common property but with clearly defined rules of access and utilization	
	Riparian Forest	Fruits, fish, crawfish	Common/private property	Conversion into flood plain sugar cane cultivation area
	Freshwater Swamp Forests	Fish, thatch, bushmeat, rope	Private Property	Importance for rice cultivation
	Mangrove Forest	Kiss meat, fish, clams	Open access	Mangrove in pristine condition; not exploited; security and resource availability concerns due to presence of rehabilitated chimpanzees
	Coastal Savannah	Poles, cattle grazing (past), some thatch	Common property	Uncontrolled fires

	Sacred Groves (Male/Female)	Cultural	Poro/sande membership; taboos/sanctions	Poro and sande still very strong in the community
Sembehun	Primary Rainforest	Timber, fruits, medicines, poles, bushmeat	Common property, and possible state ownership? (PA)	Selective logging through pit-sawing; potential for ecotourism
	Secondary Forest	Charcoal, firewood, poles, medicines, oil palm	Common property with defining access & use	
	Farm Bush	Firewood, poles, medicines, bushmeat	Common/temporal right	Conversion into savannah with increased cultivation/fires
	Coastal Savannah	Cattle grazing, palm fruits, poles, firewood, charcoal, fruits	Common property	Large area of unique Parinari macrophylla forest under threat from charcoal burners; destructive felling of palms
	Freshwater Swamp Forest	Poles, fish, thatch	Common property	Poles for electrification of Robertsport extracted from swamp forest
	Mangrove	Fish, firewood	Common/open access	Threat from wood cutters to sell to fish smokers in Robertsport
Garpu Town	Primary Rainforest	Bushmeat, gold, medicines, rattan, mushrooms	Common/FMC/TSC?/PA?	Small steadily growing number of gold miners; hunting of all manner of wildlife; elephants still present in the forest
	Logged Forest	Timber, rattan,	Common/FMC/TSC?/PA?	Large number of pit-sawing

		medicines, bushmeat, snails		communities established; bushmeat hunting & some farming; large quantity of large diameter size rattan high.
	Farm Bush	Poles, fruits, medicines, ropes, bushmeat, thatch, oil palm, snails	Private property; some oscillation between private and common property although rights are with the person who first cleared the land	Some conversion into plantation forest
	Riparian Forest	Fish, bush pepper	Common property	
	Freshwater Swamp Forest	Thatch, fish	Common property	Limited technical knowledge in cultivating swamp for rice
	"Needepo" (Sacred Grove)	Cultural	Common property	Site for sacred rituals/religious ceremonies
	Plantation Forest	Cocoa, rubber, oil palm	Private property	High price for rubber is encouraging small cocoa holders to convert plantations into rubber plantation
Goll's Town	Secondary Forest	Poles, Timber, bushmeat, rattan, fruits, medicines	Common property	No visible signs of infraction
	Freshwater Swamp Forest	Thatch, palm wine, rattan	Common property	Controlled exploitation of *Raphia* palm for wine and thatch
	Farm Bush	Oil palm, poles, rattan, medicines, bushmeat, fruits, firewood	Common property	If planted with long duration tree crops, rights to the land will last as long as it is retained with the crop, or else

				reverts to community use
	Sacred Grove	Cultural	Common property/poro/sande	Strength of poro is declining due to Christianity
	Plantation Forest	Rubber, charcoal	Private property	Old rubber plantation being cut down for charcoal and replanting
Kilima Bendu	Guinea Savannah	Poles, timber, thatch, grass, bushmeat, palm oil, palm wine, rice farming	Common property; forest fire management previously trained by FDA	Initial breakdown in fire management during civil war, but has rebounded with the return of peace
	Freshwater Swamp Forest	Fish, poles, thatch, palm wine, medicines, fiber, rice farming	Private and family	Major sources of water for dry season vegetable gardening activities
	Plantation Forest	Oil palm, Acaccia, cocoa, coffee, poles, cola nuts	Seen by community as FDA property	Uncontrolled fires are destroying the plantations; seen by community as limiting land available for agricultural activity
Zaewordamai	Secondary Forest	Timber, rattan, medicines, bushmeat, fruits	Community owned	Pit-sawing activities and conversion through slash-and-burn
	Farm Bush	Oil palm, palm wine, rattan, poles, medicines	Families/private	Key site for cultivating cassava and transformation into banana plantations
	Freshwater Swamp Forest	Timber, fish, bushmeat, *Raphia*,	Families/private	

		palm wine, thatch		
	Sacred Grove	Cultural	Poro/Sande/community	Restricted access for non-members and appears to be very strong in the community
	Plantation Forest	Cocoa, coffee, timber, cola nuts, bushmeat, poles	Private property	Some effort now underway for rehabilitation through NGO support; some problems with black pod disease
Gohn's Town	Primary Rainforest	Timber, medicines, fruits, bushmeat	Community owned/FMC/TSC	Forest management committee has been established by FDA
	Secondary Forest	Timber, fruits, bushmeat, poles, rattan, medicines	Community/family	
	Freshwater Swamp Forest	Rattan, bushmeat, fish, thatch, fiber, palm wine	Family/private	Source of *Raphia* palm
	Farm Bush	Rattan, bushmeat, poles, palm oil, palm wine	Community/family	Very rich in rattan but limited exploitation
	Sacred Grove	Cultural	Poro/sande membership; taboos/sanctions	Respectable local institutions
	Plantation Forest	Rubber	Private	

Note: FMC (Forest Management Contract); TSC (Timber Sale Contract); PA (Protected Area); FDA (Forestry Development Authority)