



REPUBLIC OF LIBERIA
FORESTRY DEVELOPMENT AUTHORITY (FDA)

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REF: MD/175/2022/-5

June 3, 2022

Lorena Sediari Diaz
Managing Director
West African Forest Development Inc.
14th Street Sinkor, Old City Builder's
Monrovia, Liberia

Dear Mrs. Diaz:

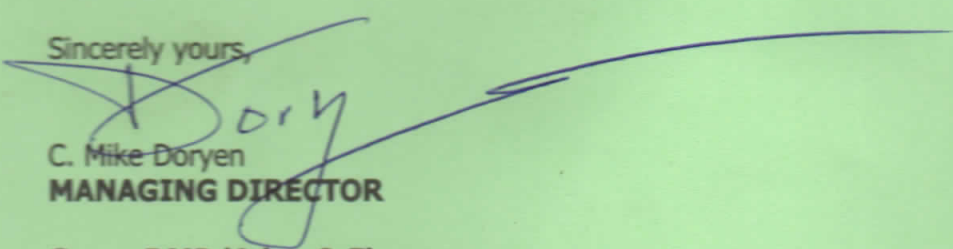
The Management of the Forestry Development Authority extends compliments and writes to inform you that after a thorough review of the **Five Year Forest Management Plan of West African Forest Development Inc. /Gheegbarhn Community Forest** by the joint technical team comprising of the Commercial Forestry Department, Community Forestry Department, Conservation Department, and Research and Development Department (R&D), we hereby approve said Plan having met all basic requirements.

These requirements, which include completeness, accuracy, and quality of information of this Plan, are prescribed in the FDA Guidelines for Forest Management Planning in Liberia and the Ten Code Regulations.

Therefore, Management anticipates full compliance in the implementation of this Plan, as we strive to ensure sustainable Forest Management in Liberia.

Kind regards.

Sincerely yours,


C. Mike Doryen
MANAGING DIRECTOR

Cc: DMD/Adm. & Finance
DMD/Operations
TM/Commercial
NAO
File

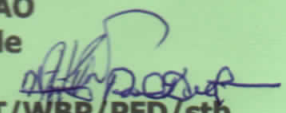

CMD/JJT/WBP/PFD/stb

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ACRONYMS

AC	Annual Coupe
Acs	Acres
AOP	Annual Operation Plan
DBH	Diameter at Breast Height
CF	Community Forest
DCL	Diameter Cut Limit
EIA	Environmental Impact Assessment
EIS	Environmental Impact Studies
FC	Forest Compartment
FDA	Forestry Development Authority
GIS	Geographic Information Systems
GSV	Gross Standing Volume
Ha	Hectare
MDCL	Minimum Diameter Cut Limit
NTFP	Non-Timber Forest Product
RIL	Reduced Impact Logging
SFMP	Strategic Forest Management Plan
UTM	Universal Traverse Mercator
WAFDI	West African Forest Development Inc.

ACKNOWLEDGEMENT

This Strategic Five (5) Years Forest Management Plan (SFMP) of Gheegbarhn Community Forest has been compiled and prepared by Mrs. Lorena Sediari Diaz, Chain of Custody (COC) Specialist, West African Forest Development Inc.

Information regarding the environment and ecosystems was provided by FERI (Forestry & Environmental Research Institute), an independent Environmental Evaluator, recognized by the Environmental Protection Agency (EPA).

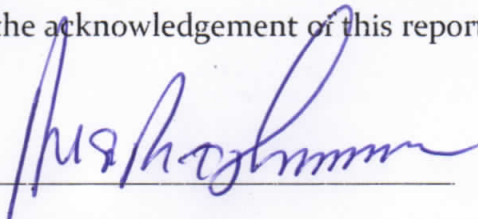
The maps and analysis were prepared using the facilities of the Geographic Information Systems (GIS) and Remote sensing Laboratory of Liberia Institute for Statistics & Geo-Information Services (LISGIS); specifically, making use of the technical expertise of Messrs. Director Thomas Davis, Augustine B.M. Johnson, Gualberto Ojo and Hiniely Labalan.

During the process of developing and preparing this Management Plan, financial support was provided by West African Forest Development Inc.

The undersigned wishes to extend her thanks and appreciation to Mr. Fang Jiang Sheng, Chief Executive Officer of West African Forest Development Inc., for his support

Many thanks to all others who contributed one way or the other, but were not mentioned in the acknowledgement of this report.

SIGNED _____



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COC Specialist

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1.0 EXECUTIVE SUMMARY

This Five-Year Forest Management Plan has been prepared by the Management of **WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI)** as part of the Community Forest Reform process at the Forestry Development Authority. This is done to ensure compliance with Section Three (3) of the Guidelines for Forest Management Planning in Liberia and to ensure the sustainable management of Gheegbarhn # 1 Community Forest. The Forest covers 26,363.00 hectares and is located in District #2, Grand Bassa County, Liberia. It lies within Latitude: (0404112 - 0723149) North of the Equator and Longitude: (0404112 - 0704122) West of the Greenwich Meridian. **WAFDI's** vision is to sustainably engage in commercial logging in keeping with the National Forestry Reform Law of 2006 and its attending regulations. In this regard, **Messrs. WAFDI** has extended its agreement with the Community from seven (7) to fifteen (15) year will take into consideration the environment and sustainability of the forest while creating job opportunities. Indeed, the sustainable management of Gheegbarhn Community Forest to satisfy the social, economic and environmental concerns for the affected communities is **WAFDI'S** priority objectives.

The company intends to coordinate its financial, material and human resources to maximize profit while in the same token contributing to the Pro-poor Agenda through the provision of jobs, human resource capacity and infrastructural development.

Moreover, we stand ready to collaborate with the Government, interested NGO's and individuals in the implementation of programs that promotes the Conservation, Community and Commercial aspects of forestry. Our aim for the sector is to increase value added on our wood products and also demonstrate our ability to gain Forest Certification by an independent forest certification body such as the Forest Stewardship Council. **WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI)** will work in accordance with the Laws of Liberia and will have a long-term investment interest in Liberia.

The goal of **WAFDI** is to conduct sustainable logging operations in Gheegbarhn # 1 Community Forest in a way and manner that would ensure sustainable development, sustainable forest management with reduce impact on biodiversity (both fauna and flora) and the environment. To achieve this goal, the company have reformed its initial plan to incorporate increase sustainability.

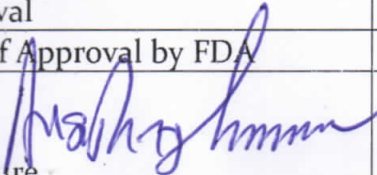
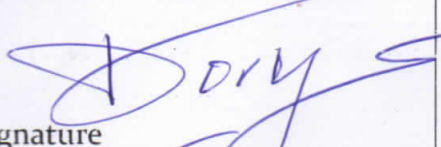
This Management Plan summarizes the historicity of **WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI)** and manner and form in which the goals and objectives of the company are to be achieved as enshrined in the Company's Business Strategy. Ensuring that the principle of Sustainable Forest Management is adhere to, the corporation has put in place appropriate policy that addresses commercial, community, conservation, environmental and social issues during its course of operations. By implementing this policy, **WAFDI** intends to contribute to the improvement of the socio-economic development of the Liberian populace, especially the forest dwelling communities within its concession.

We have identified competent and professional individuals with vast experience in logging operations, reforestation and related field for employment to serve on the

management team. This Plan provides a chart outlining the various positions of the management team including years of experience. In our quest to assist the government in its strife to reduce poverty in Liberia through capacity building, WAFDI shall provide regular training opportunities in modern technology for its workforce to enhance efficiency and productivity. The corporation also intends to consult with community leaders, county officials in its concession area in planning and making available skill training programs that would empower the affected community dwellers in some various disciplines such as mechanics, caterpillar operators and a way of providing value-addition using timber and non-timber forest products among other things in order to improve their livelihood.

2.0 DOCUMENT RECORD SHEET

Table 1: Document Record Sheet

Description	Information
Name and Contact Address of Contract Holder	West African Forest Development Inc. (WAFDI) Old City Builder's Building 14th Street, Sinkor, Monrovia, Liberia
Contract Reference Number	CFMA #001
Strategic Forest Management Plan Reference Number	SYFMP #01
Contract Effective Date	December, 2018
Strategic Forest Management Plan Date of Approval	November, 2018
Five-Year Forest Management Reference Number	5-YFMP #01
Date of Submission to FDA for Approval	March 16, 2022
Date of Approval by FDA	
Signature 	Mrs. Lorena Sedarin Diaz President/ CEO
Signature 	C. Mike Doryen Managing Director Forestry Development Authority (FDA)

June 3, 2022

3.0 GENERAL FRAMEWORK

3.1 Company's Profile/ History

WAFDI is a registered cooperative entity and organized under the Laws of the Republic of Liberia. Our offices are located at Old City Builder's Building, 14th Street, Sinkor, Monrovia, Liberia. The Company though newly established in Liberia, intends to hire the services of qualified and experienced Liberian Loggers, Silvicultural Officers who have the professional skills in planning and managing the forest for maximum output through Sustainable Forest Management. Our goal is to participate in national developmental programs in Liberia, to restore hope to inhabitants by contributing to the forestry industry through production, processing, marketing of Liberia wood products and engage in Reforestation Programs of various tree species. Our objectives include:

- To provide employment, income and livelihood to employees and communities
- Put in place legally accepted employment, remuneration scheme, while providing sustainable income for employees.
- Promoting the provision of sustainable livelihoods services for employees and communities
- To engage in extraction and exportation of round logs
- To engage in the processing of timber and timber products through value addition.
- To engage in the exportation of finished, semi – finished and processed forest products (sawn timber, etc)
- Processing and packaging of processed timber for the international/local markets

➤ Number of Employees

In keeping with the National Forestry Reformed Law 2006, the best labor practices, and the Labor Laws of Liberia, the Company has recruited skilled to carryout sustainable management of the company's assets. The Company will continue to improve its human and technical resources. Below is a breakdown of labor required initially for operations for a period of one calendar year. Recruitment and employment by the company are consistent with the Labor Laws of Liberia and International Labor Standards.

Table 2: Breakdown of Workforce

Description	# OF PERSON	LIBERIAN	FOREIGNER
Skilled	100	75	25
Unskilled	70	70	0
Professional	25	10	15

❖ Logging Materials and Machines

The Management of WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI) has in place some of the best equipment that are suited for commercial logging operations in tropical rainforest. Our materials and machines are listed in Table Three below:

Table 3: Logging Materials and Machines for WAFDI's Operations

S/N	MATERIALS & MACHINES	MODEL	QUANTITY
1	Bulldozer	Cat D7 & 8	4
2	Load bed	Renault 340	3
3	Wheel Loader	Cat 966B	3
4	Grader	Cat 950B	2
5	Skidder (545)	Cat 545	3
6	Welding Machine	Hobart	1
7	Fuel tank	Renault 340	2
8	Stacker	Cat 930E	2
9	Power Saw	Sthil 070	6
10	Generator (75 KVA)	Perkins	3
11	Pick - up (Double Cabin)	Nissan (Double & Single Cabin)	4
12	Logging truck	Renault 320	4
13	Computer	Desk top & Laptop (Dell)	5

3.2 Description of the Community Forest Area

❖ Location, Surface Area and Description of Geographic Boundaries

Gheegbarhn # 1 Community Forest lies within Latitudes (0404112 - 0723149), North of the Equator and Longitudes (0404112 - 0704122), West of the Greenwich Meridian and it is located in District # 2, Grand Bassa County, Liberia. The Indigenous and residents of the area deeply appreciate their natural environment and value the Forest that forms an integral part of their lives. The Forest is an important source of economic, cultural and spiritual wealth to the people of District #2. It is the foundation of a diverse resource-based economy, which many residents depend upon for subsistence livelihoods. Timber harvesting for the purposes of generating revenue, improving stand viability, and biological restoration and maintenance, is critical to WAFDI's objectives for managing Gheegbarhn # 1 Community Forest. More to that, maintaining the existing quality of water and wildlife habitats during timber harvesting on the Community Forest is the foundation for the developing this Forest Management Plan. Some characteristic species found in the Community Forest ecosystem include *Lophira alata*, *Didelotia idea*, *Amphimas pterocarpoides*, *Hallea ciliata*, *Nauclea diderrichii*, etc. WAFDI will continue to manage the Community Forest in a way that will provide the needs of the affected communities, and at the same time maintain the Forest's ecological integrity.

❖ Administrative and Legal Status

Gheegbarhn # 1 Community Forest is sustainably managed by the **WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI)** under the technical guidance of the Forestry Development Authority (FDA). WAFDI's management of the Forest is guided by the below documents over the management regime:

- The National Forestry Reform Law of 2006;
- The Guidelines for Forest Management Planning in Liberia;
- The Community Rights Law of 2009 with Respect to Forestlands and its attending Regulations;
- The Ten Core Regulations;
- The Revised Code of Forest Harvesting Practices; and
- All other codes, regulations and standard operating procedures that govern commercial logging activities in Liberia.

❖ Past and Current Management

Past use of Gheegbarhn #1 Community Forest includes shifting cultivation, & unregulated hunting and collection of a variety of non-timber forest products (NTFPs). But since the signing of the Commercial Use Contract b/w the **People of Gheegbarhn # 1 Authorized Forest Community**, District #2, Grand Bassa County, & the Management of **WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI)**, the Forest has been managed for sustainable timber harvesting operations. Under WAFDI's earlier plan, which this plan reforms WAFDI have operated three annual coupes and this reform plan will incorporate it.

❖ Environmental Factors

Principle of environmental impacts has been used and we will continue to apply same to our future operations under this plan. There is therefore an Environmental Management Plan (EMP) for Gheegbarhn #1 Community Forest. The significant impacts are highlighted in the EMP, and the objectives and targets to address these impacts are documented and mitigation measures are embodied. The potential environmental impacts of WAFDI's forest management activities, including road construction, timber harvesting, extraction and haulage have also been identified through local standards such as listed in the Revised Code of Forest Harvesting Practices of Liberia. besides, we will manage the Forest in a way that maintains ecological processes and biodiversity while optimizing the benefits to the community from all uses of the forest, both now and into the future. The overall goal is to maintain species diversity and habitats in good condition. This will be achieved through a variety of measures which include, bush control, fire management, soil erosion measures, and forest protection.

I. Climate

All parts of Liberia, including Gheegbarhn #1 Community Forest enjoy dry and rainy seasons. The rainy season runs from late March to the end of November and hits two peaks in a year. There is an intensive dry season that runs from December until late February. The mean annual rainfall ranges from 1330 to 1450 mm. The average monthly maximum temperature is 29° C and the average monthly minimum temperature is 17° C.

II. Hydrography

Surface water comes as the result of the outburst of the Earth's crust. Meanwhile, precipitation contributes to the formation of surface water but does not penetrate into the ground or return to the atmosphere. This water can be drawn from streamlets, rivulets, lakes, and reservoirs for human usage. Some precipitations enter the soil through the influence of gravity. Precipitation of such passed through porous materials deep into the Earth and saturates pores made by micro-organisms in the soil and cracks sponge-like, or permeable layers of gravel, porous rocks and sand. The water in these layers is registered as ground water. Groundwater is usually excellent if the quality of dissolve particles is normal, because porous materials act as filters removing suspended and bacteria. Water samples were taken from all THREE (3) sources across Gheegbarhn Community Project Area as seen in the above Hydrology Map. Samples were taken from Wiaya Creek, Zor Creek and St. John River.

III. Vegetation

Generally, the topography of the area surrounding Gheegbarhn # 1 Community Forest is mixed; comprising steep areas with undulating hills and flat plains. The vegetation on the site is typical of a tropical forest, with canopies that are approximately 25 to 35 meters in height with climbing vines. The understory is covered with wildings of a variety of species, shrubs, herbs & a large number of ferns. The vegetation of the Community Forest is predominantly comprised of the tallest forest type (60m), with the upper canopy composed of both evergreen and deciduous species.

IV. Wildlife

The Independent Evaluator commissioned by the Contract Holder along with our crew of surveyors and enumerators, revealed a number of wildlife species, including mammals, birds, some of which are protected. All of the villages reported that hunting or setting traps was one of their economic activities in the area. Thus, they must be taught a form of sustainable wildlife management to some extent. Moreover, alternatives mean of getting proteins have to be found. A brief discussion of each kind of wildlife found in the Community Forest Area will be presented in all AOP's submitted to the Authority. Details on these are also available in the ESIA Report submitted and approved by the Environmental Protection Agency of Liberia.

❖ Communication Network and Infrastructure

I. Communication Network

In every aspect of society, communication Networks are critical to transforming and enhancing businesses. However, the primary source of communication in most parts of Gheegbarhn #1 Community Forest is by road transport. There is rarely network coverage in the area.

II. Infrastructure

❖ Socioeconomic Background

Socio-economic issues are important consideration in sustainable forest management. The area covered by this Plan provides various goods and environmental services that provide a range of socio-economic benefits for the affected communities. In terms of domestic revenue, the most significant sources are fishing, hunting and the production of different types of non-timber forest products (NTFPs). The communities have expressed a desire of their continuous participation in these activities. Forest management of issues associated with some of these important goods and environmental services is considered by WAFDI. The overall goal is to seek to sustain social and economic benefits, through the provision of a range of goods and services valued by the community.

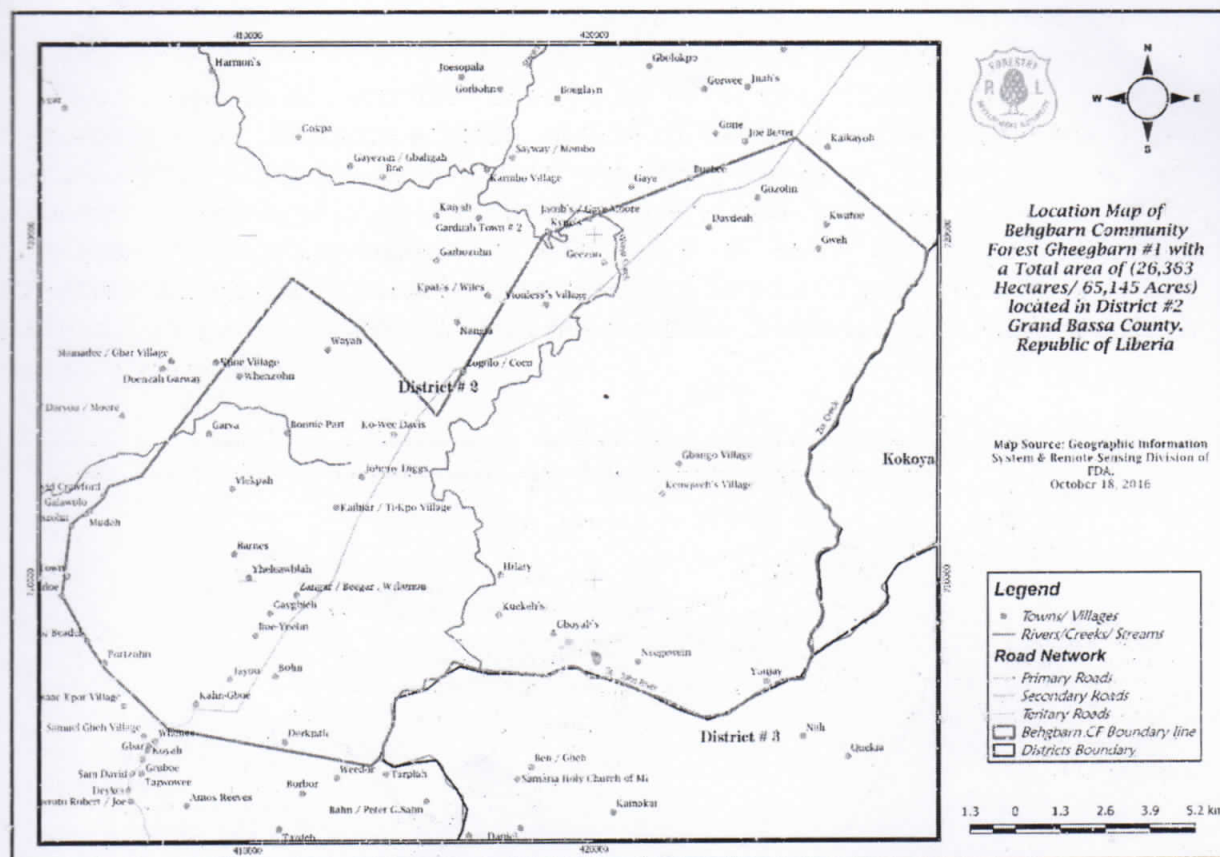


Figure 1: Location of Gheegbarhn #1 Community Forest

3.3 Description of the Forest Compartment

❖ Order of Passage within the Planning

This Five-Year Management Plan has been prepared by WEST AFRICAN FOREST DEVELOPMENT INCORPORATED (WAFDI) for the sustainable management of Compartment One of Gheegbarhn #1 Community Forest. The Forest covers 26,363.00 hectares and is located in District #2, Grand Bassa County, Liberia. It lies within Latitude: (0404112 - 0723149) North of the Equator and Longitude: (0404112 - 0704122) West of the Greenwich Meridian. To prepare this Plan, forest inventory and multiple walk-through observation of the Forest were conducted by WAFDI's technicians. Natural features, forest types and vegetation, wildlife habitat, water resources and historical features were carefully discerned and examined. Besides, forest structure, composition, and timber stock were analyzed. This forest analysis, in concert with stakeholder consultations to identify management objectives, forms the basis for the Plan. Consultation with stakeholder was focused around key forest management and planning processes, including all pre-felling requirements, and with focus on the economic, environmental and social values of the Community Forest. WAFDI hopes that implementation of this Management Plan will attention on harvest control, monitoring, inspection and assessment, as this will enable us to ascertain whether harvesting operations complied with the requirements of the Revised Code of Forest Harvesting Practices of Liberia.

❖ Location of Compartment One within the CFMA Area

Compartment One of Gheegbarhn #1 Community Forest is entirely located at the East of the Community Forest. The Compartment is bordered to the East by the Zor Creek and Bong County. Besides, the St. John River runs from East to South of the Compartment One.

❖ Surface area of Compartment One

Compartment One of Gheegbarhn #1 Community Forest has already been identified, and delineated to reflect the amended agreement with the community and to be consistent with the Guidelines for Forest Management Planning in Liberia. The 26,363.00 hectares of the Community Forest has been delineated into three (3) compartments; and each compartment will be operated on a five-year basis in an annual coupe system. Compartment One contains about 8,787.67 hectares of forestlands.

4.0 ASSESSMENT OF THE PREVIOUS 5YFMP

5.0 DESCRIPTION AND LOCATION OF COMPARTMENT ONE

5.1 Boundaries and Surface area of Compartment One

The 26,363.00 hectares of the Community Forest have been delineated into three (3) compartments; and each compartment will be operated on a five-year basis in an annual coupe system. Compartment One contains about 8,787.67 hectares of forestlands.

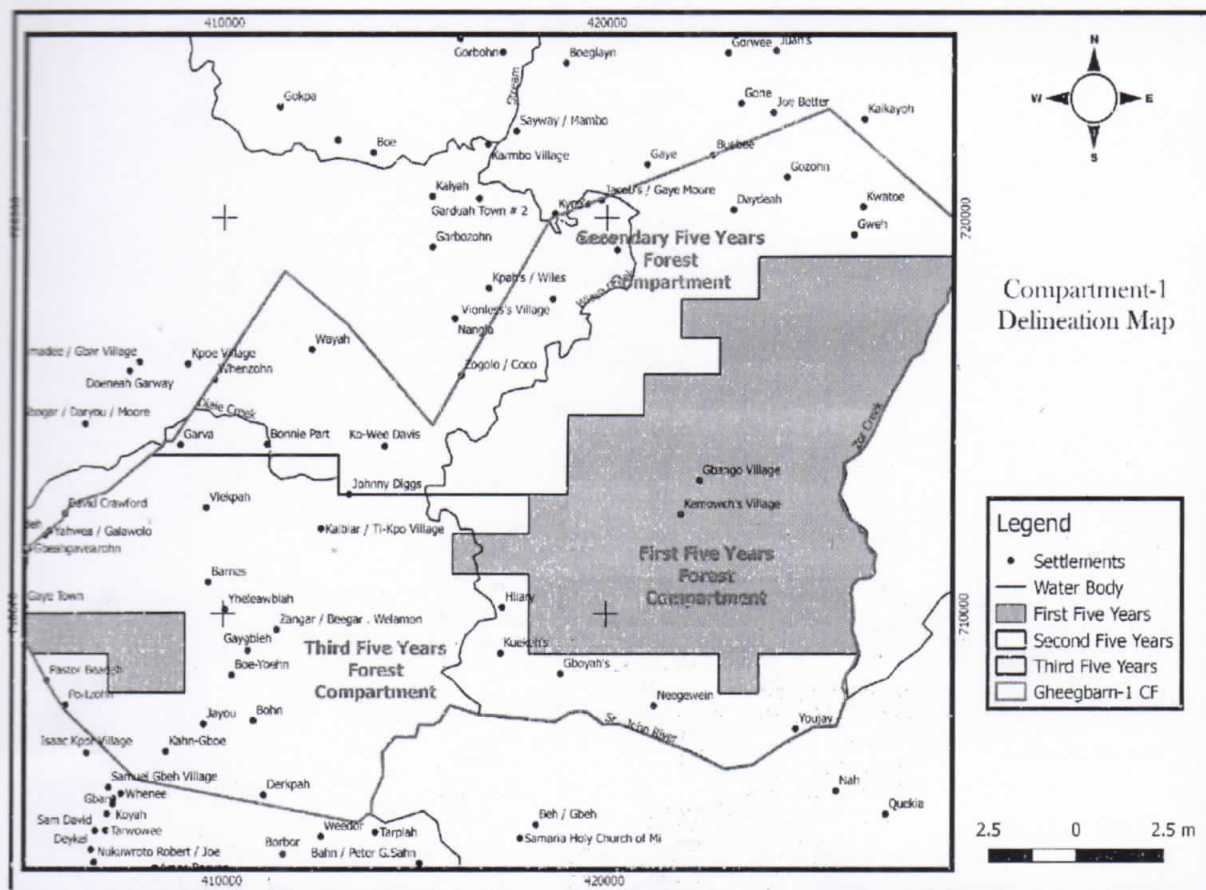


Figure 3: Compartment One Delineation

Table 4: Boundary Coordinates of Compartment One

No	Latitude	Longitude	Remark
1	429526	719034	Zor Creek
2	424002	719003	WP-1
3	424002	717951	WP-2
4	421981	717945	WP-3
5	421981	716978	WP-4
6	422997	716981	WP-5
7	422996	716041	WP-6
8	420995	716047	WP-7
9	420995	715002	WP-8
10	418998	715002	WP-9
11	418996	712998	WP-10
12	417991	712997	WP-11
13	417991	711997	WP-12
14	415985	711997	WP-13
15	415985	710997	WP-14
16	417991	710997	WP-15
17	417991	708997	WP-16
18	422992	708998	WP-17
19	422992	707998	WP-18
20	424002	707998	WP-19
21	424002	708999	WP-20
22	426613	709001	WP-21
23	409000	708006	WP-22
24	408998	710000	WP-23
25	404663	709986	WP-24
26	404602	709618	WP-25
27	404964	708994	WP-26
28	406992	708994	WP-27
29	406993	708007	WP-28

5.2 Description of the forest Compartment

❖ Biophysical Background

I. Soil and Topography

The soil type as investigated by our Contract Evaluator is a mixture of lithosols and some laterite, which is reddish brown in color containing aluminum iron, oxides, acid and low in nitrogen concentration; swamp soil occurring in swampy areas, high concentration of humus with layers consisting of biodegradable materials; and alluvial soil with a high nutrient concentration which is suitable for agriculture.

II. Forest Stratification

Gheegbarhn #1 Community Forest covers 26,363.00 hectares of forestland. The area has been delineated into three (3) separate compartments, of which Compartment One covers about 8,787.67 hectares. Compartment One has further been stratified into production and non-production zones as it is required by the Guidelines for Forest Management planning in Liberia and the Revised Code of Forest Harvesting Practices (see Table Four below).

Table 5: Summary of Surfaces/ Land Cover Type on FC-1, Calculated by GIS

Land Cover Type	Surface Area (ha)	% of the Total Area
Total Area of Compartment One	8,787.00	100
Total harvestable Area	8,435.52	96
Total non-harvestable Area	351.48	4

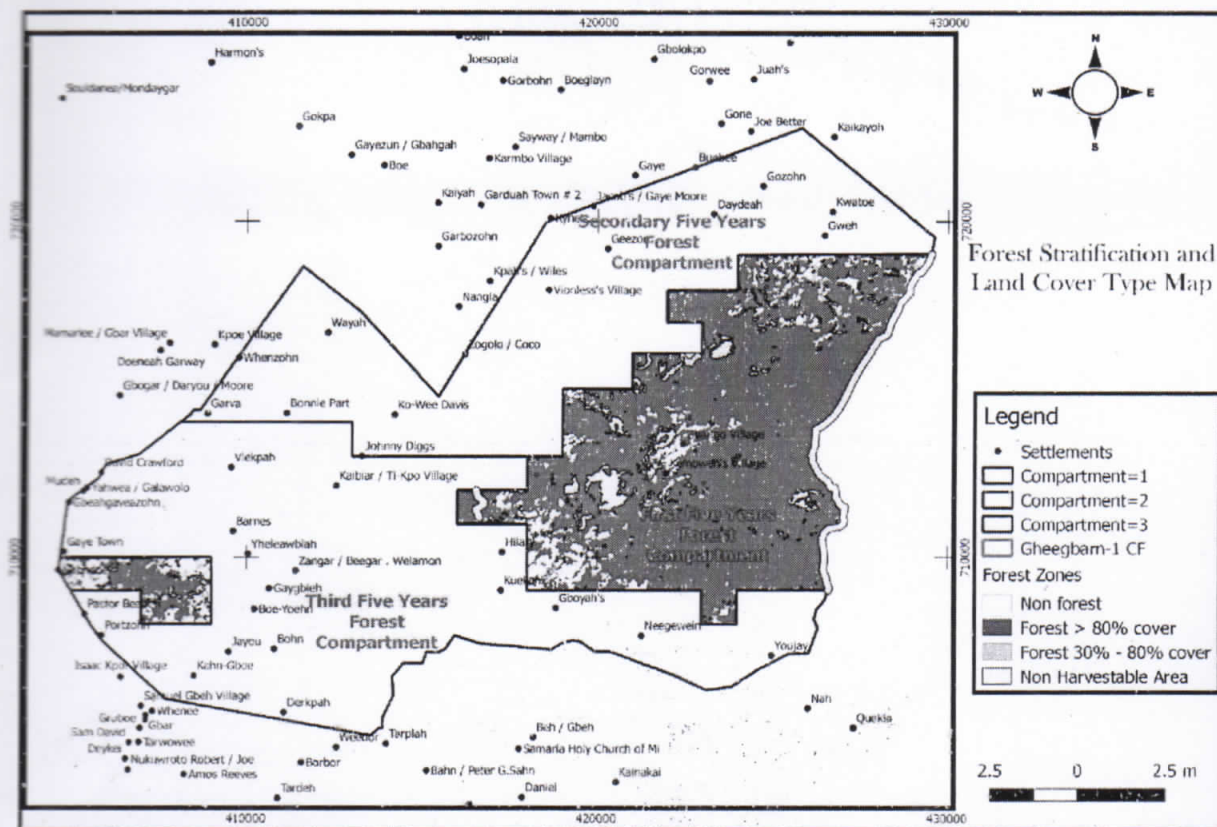


Figure 4: Forest Stratification & Land Cover Types on Compartment One

❖ Fauna

The Independent Evaluator commissioned by the Contract Holder along with our crew of surveyors and enumerators, revealed a number of wildlife species, including mammals, birds, some of which are protected. All of the villages reported that hunting or setting traps was one of their economic activities in the area. Thus, they must be taught a form of sustainable wildlife management to some extent. Moreover, alternatives mean of getting proteins have to be found. A brief discussion of each kind of wildlife found in the Community Forest Area will be presented in all AOP's submitted to the Authority. Details on these are also available in the ESIA Report submitted and approved by the Environmental Protection Agency of Liberia.

❖ Socioeconomic Background

I. Demography Description

Stratification & Mapping-Populated Places Dataset Demography-The socio-economic survey reveals the number of towns as well as the population in each town. The actual location of each town is documented by using the GPS; thus, the UTM Coordinates are taken and recorded. Therefore, the actual location of each affected community is known. The combined population of the area is 3,405 people. Of this total, 1654 are males, while 1751 are females. The major ethnic group is Bassa.

II. Human Locations (Villages & Settlements).

The human settlements that fall within, and around Gheegbarhn #1 Community Forest are listed in Table Five below:

Table 6: Affected Communities in and around the Contract Area

TOWN/VILLAGE	MALE	FEMALE	LATITUDES	LONGITUDES
Kaibiar / Ti-Kpo Village	18	20	412541.000000000000	712130.000000000000
Johnny Diggs	13	20	413278.000000000000	713004.000000000000
Ko-Wee Davis	25	21	414199.000000000000	714225.000000000000
Zogolo / Coco	66	86	416204.000000000000	716021.000000000000
Nangla	34	38	416017.000000000000	717454.000000000000
Kpah's / Wiles	46	59	416911.000000000000	718227.000000000000
Vionless's Village	27	22	418591.000000000000	717958.000000000000
Geezon	25	30	420280.000000000000	719185.000000000000
Jacob's / Gaye Moore	59	51	419861.633998000000	720448.281802000000
Gaye	5	6	421057.368832000000	721369.171230999900
Buebee	11	7	422785.358080999900	721613.281802000000
Bonnie Part	52	55	411136.000000000000	714270.000000000000
Youjay	4	4	424992.000000000000	707082.000000000000
Neegewein	44	31	421272.000000000000	707670.000000000000
Gboyah's	26	27	418818.000000000000	708484.000000000000
Kuekeh's	27	21	417242.000000000000	709008.000000000000
Hilary	22	28	417279.000000000000	710153.000000000000
Gbango Village	5	3	422460.000000000000	713359.000000000000
Kemoweh's Village	17	17	421980.000000000000	712502.000000000000
Wayah	26	35	412292.000000000000	716671.000000000000
Garbozohn	20	36	415424.000000000000	719256.000000000000
Kaiyah	23	32	415417.000000000000	720546.000000000000

Garduah Town # 2	16	15	416650.0000000000	720486.0000000000
Kyne's	34	35	418637.0000000000	720095.0000000000
Gone	27	37	423517.60661000000	722908.3757360000
Joe Better	11	14	424364.24751000000	722680.70156199900
Kaikayoh	58	72	426743.4686510000	722516.0772969990
Gozohn	41	34	424720.4353780000	721048.2651649990
Daydeah	8	9	423320.6839070000	720206.2045040000
Gweh	27	28	426477.0000000000	719578.0000000000
Kwatoe	12	23	426706.0322550000	720279.6409010000
Bahn / Peter G.Sahn	60	57	415130.0000000000	703670.0000000000
Tarplah	12	12	413979.0000000000	704461.0000000000
Weedor	23	22	412558.0000000000	704353.0000000000
Borbor	17	18	411571.0000000000	703904.0000000000
Derkpah	18	15	411067.0000000000	705393.0000000000
Bohn	6	9	410793.0000000000	707275.0000000000
Boe-Yoehn	25	28	410225.0000000000	708447.0000000000
Jayou	24	12	409492.0000000000	707197.0000000000
Kahn-Gboe	35	23	408510.0000000000	706490.0000000000
Whenee	13	12	407330.0000000000	705430.0000000000
Gbar	16	16	407132.0000000000	705303.0000000000
Koyah	16	11	407119.0000000000	705178.0000000000
Gruboe	15	5	406963.0000000000	704924.0000000000
Tarwowie	16	14	406933.0000000000	704505.0000000000
Sam David	8	6	406654.0000000000	704499.0000000000
Deykei	4	4	406548.0000000000	704020.0000000000
Nukuwroto Robert / Joe	6	7	406627.0000000000	703695.0000000000
Amos Reeves	7	15	408239.0000000000	703560.0000000000

Samuel Gbeh Village	5	6	407001.0000000000	705588.0000000000
Isaac Kpor Village	0	1	406419.0000000000	706453.0000000000
Portzohn	7	2	405859.0000000000	707682.0000000000
Pastor Beadeh	20	20	405359.0000000000	708307.0000000000
Nahndoe	23	32	404603.0000000000	709613.0000000000
Gbeahgaveazohn	24	32	404899.0000000000	711635.0000000000
Mudeh	18	16	405317.0000000000	711971.0000000000
David Crawford	15	13	405837.0000000000	712510.0000000000
Yahwea / Galawolo	11	12	405431.0000000000	712070.0000000000
Gbogar / Daryou / Moore	75	86	406366.0000000000	714791.0000000000
Doeneah Garway	7	8	407534.0000000000	716132.0000000000
Mamadee / Gbar Village	21	23	407797.0000000000	716356.0000000000
Kpoe Village	6	8	409071.0000000000	716310.0000000000
Whenzohn	20	20	409766.0000000000	715916.0000000000
Vlekpah	39	45	409553.0000000000	712672.0000000000
Barnes	41	44	409610.0000000000	710783.0000000000
Yheleawbiah	12	9	410044.0000000000	710098.0000000000
Gaygbieh	11	17	410645.0000000000	709073.0000000000
Zangar / Beegar . Welamon	9	14	411396.0000000000	709592.0000000000
Garva	42	43	408879.0000000000	714261.0000000000
Nah	36	39	426047.0000000000	705509.0000000000
Gaye Town	62	59	404771.19838700000	710167.69614100000
	1654	1751		

III. Infrastructure

As a part of the pre-felling activities, West African Forest Development Inc negotiated a Third-Party Social Agreement with the Affected Communities listed above following the procedures set out in Section 32 of FDA Regulation 105-07. During the awareness and validation processes, FDA and civil society educated the affected communities. This resulted in the formation of the Gheegbarhn Community Forest Management Body (GCFMB). More studies on the infrastructure in the Contract Area have revealed the lack of basic infrastructure; thus, the area is underdeveloped. There is a great need for the infrastructure development inside and outside of the Contract Area. The company will provide medical and healthcare facilities, safe drinking water and other basic necessities to improve the livelihoods of the affected communities as well as the workforce of West African Forest Development Inc.

IV. Local Community Activities

As part of the forest inventory & assessment, socio-economic data was collected & consultations were held with local communities in six of the fourteen main towns and villages in and around the Contract Area. During these consultations, inhabitants of the selected villages were asked about their environmental concerns in the area. In addition, they were also asked on how they make their living. West African Forest Development Inc., will ensure the involvement of the communities in planning forest management in order to enhance the local community activities for development. The company will re-enforce her commitment to promote harmony and peace between the company and the local communities.

5.3 Management Units within Compartment One

The management units on Gheegbarhn #1 Community Forest provided in Table Five below:

Table 75: Summary of Management Units within Compartment One

Unit #	Land Use Affection	Description	Surface Area (ha)	%
1.0	Non-harvestable Area (Protection, Conservation, & others	Buffers, sacred areas wildlife corridors, etc.	351.48	4
2.0	Harvestable Area	For Logging Activities	8,435.52	96
	Total		8,787.00	100

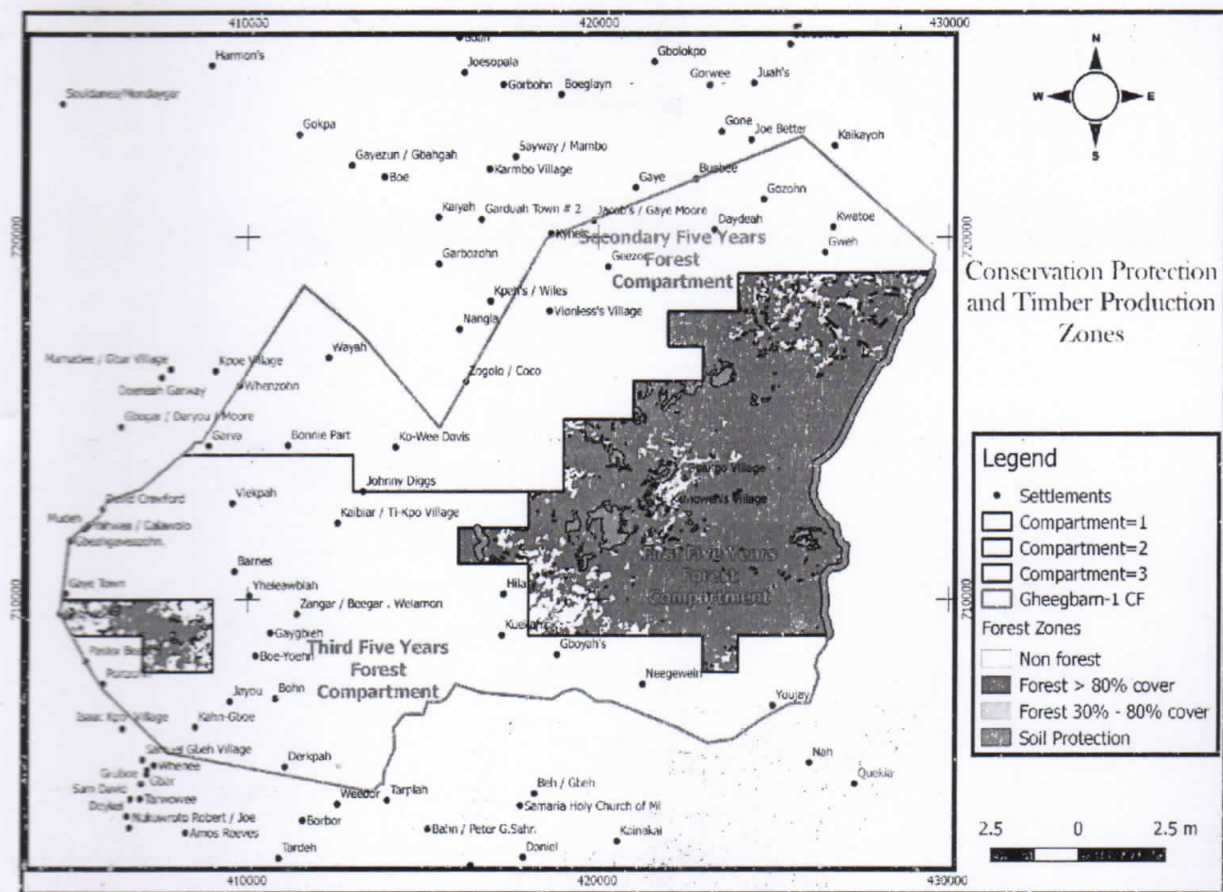


Figure 5: Forest Management Units on Compartment One

5.4 Synthesis of Results of the Multi-resource Inventory Conducted in the FC
The Guidelines for Forest Management Planning in Liberia requires that synthesis of the results of the multi-resource inventory conducted on forest compartments must be presented. However, the Guidelines exempts compartment one of all forest concessions from this requirement. Therefore, this Management Plan does not include the synthesis of the results of the multi-resource inventory because it is intended for sustainable management of Compartment One of Gheegbarhn #1 Community Forest.

6.0 PLANNING OF LOGGING ACTIVITIES ON COMPARTMENT ONE

6.1 Average Yields on Forest Compartment one

According to Section 6.1 of the Guidelines for Forest Management Planning in Liberia, operators are required to present in their management plans, the average yields on the compartments within their resource areas. However, this requirement does not apply to this Management Plan, as it is the First Five-Year Forest Management Plan for the sustainable management of Gheegbarhn #1 Community Forest.

6.2 Partitioning into Annual Coupes, Rotation order and Opening Schedule

- Boundaries of Annual coupes #1 to 5 based on Surface Area

I. Partitioning into Annual Coupes

Forest Compartment One of Gheegbarhn #1 Community Forest has been delineated into five (5) management units known as annual coupes. The coordinates of the boundaries of annual Coupes of Compartment One are presented in Table Eight A-E below.

Table 8-A: Geographic Coordinates of Annual Coupe # 1

WAYPOINTS	LATITUDES	LONGITUDES
56	423000	717000
57	424000	717000
58	425000	717000
71	421000	716000
72	422000	716000
73	423000	716000
74	424000	716000
75	425000	716000
76	426000	716000
88	419000	715000
89	420000	715000
90	421000	715000
91	422000	715000
92	423000	715000
93	424000	715000
94	425000	715000
95	426000	715000
108	419000	714000
109	420000	714000
110	421000	714000
111	422000	714000
112	423000	714000
113	424000	714000
128	419000	713000
129	420000	713000
130	421000	713000
131	422000	713000
132	423000	713000
133	424000	713000

Table 8-B: Geographic Coordinates of Annual Coupe # 2

WAYPOINTS	LATITUDES	LONGITUDES
132	423000	713000
133	424000	713000
134	425000	713000
151	421000	712000
152	422000	712000
153	423000	712000
154	424000	712000
155	425000	712000
156	426000	712000
172	420000	711000
173	421000	711000
174	422000	711000
175	423000	711000
176	424000	711000
177	425000	711000
178	426000	711000
179	427000	711000
195	420000	710000
196	421000	710000
197	422000	710000
198	423000	710000
199	424000	710000
200	425000	710000
201	426000	710000
221	424000	709000
222	425000	709000
223	426000	709000

Table 8-C: Geographic Coordinates of Annual Coupe # 3

WAYPOINTS	LATITUDES	LONGITUDES
127	418000	713000
128	419000	713000
129	420000	713000
130	421000	713000
131	422000	713000
132	423000	713000
148	418000	712000
149	419000	712000
151	421000	712000
152	422000	712000
153	423000	712000
170	418000	711000
171	419000	711000
172	420000	711000
173	421000	711000
193	418000	710000
194	419000	710000
195	420000	710000
196	421000	710000
197	422000	710000
198	423000	710000
199	424000	710000
215	418000	709000
216	419000	709000
217	420000	709000
218	421000	709000
219	422000	709000
220	423000	709000
221	424000	709000
241	423000	708000
242	424000	708000
268	419999	711997

Table 8-D: Geographic Coordinates of Annual Coupe # 4

WAYPOINTS	LATITUDES	LONGITUDES
93	424000	715000
94	425000	715000
95	426000	715000
96	427000	715000
113	424000	714000
114	425000	714000
115	426000	714000
133	424000	713000
134	425000	713000
135	426000	713000
146	416000	712000
147	417000	712000
148	418000	712000
155	425000	712000
156	426000	712000
168	416000	711000
169	417000	711000
170	418000	711000
178	426000	711000
179	427000	711000
180	405000	710000
181	406000	710000
182	407000	710000
183	408000	710000
184	409000	710000
202	405000	709000
203	406000	709000
204	407000	709000
205	408000	709000
206	409000	709000
225	407000	708000
226	408000	708000
227	409000	708000

Table 8-E: Geographic Coordinates of Annual Coupe # 5

WAYPOINTS	LATITUDES	LONGITUDES
27	424000	719000
28	425000	719000
29	426000	719000
30	427000	719000
31	428000	719000
32	429000	719000
39	422000	718000
40	423000	718000
41	424000	718000
42	425000	718000
43	426000	718000
44	427000	718000
45	428000	718000
55	422000	717000
56	423000	717000
57	424000	717000
58	425000	717000
59	426000	717000
60	427000	717000
61	428000	717000
75	425000	716000
76	426000	716000
77	427000	716000
95	426000	715000
96	427000	715000

▪ Criteria for Partitioning of Compartment One into Annual Coupes

As required by Section 6.2 of the Guidelines for Forest Management Planning in Liberia requires all operators to delineate each forest compartment into five annual coupes, with each coupe representing 20% of the total harvestable area of the delineated compartment. So, in order to fulfill this criterion, WAFDI has technically delineated the harvestable areas of Compartment One of Gheegbarhn #1 Community Forest into five annual coupes as indicated in Table Seven below.

▪ Procedure to Define the Annual Coupes

The Guidelines for Forest Management Planning in Liberia states that the procedure for defining annual coupes on forest compartments must be provided. Compartment One of Gheegbarhn #1 Community Forest covers about 8,787.00 hectares, with a harvestable area of about 8,435.52 hectares of forestlands. Therefore, WAFDI has partition the 8,435.52 hectares harvestable areas of Compartment One into five annual coupes, with each amounting to 1,687.104 hectares (20% of harvestable area of forest Compartment One).

Table 9: Annual Coupes on Forest Compartment One

AC	Harvestable Area (ha)	Harvesting Date
1.0	1,687.104	2018/ 2019
2.0	1,687.104	2019/ 2020
3.0	1,687.104	2020/ 2021
4.0	1,687.104	2021/ 2022
5.0	1,687.104	2022/ 2023
Total	8,435.520	

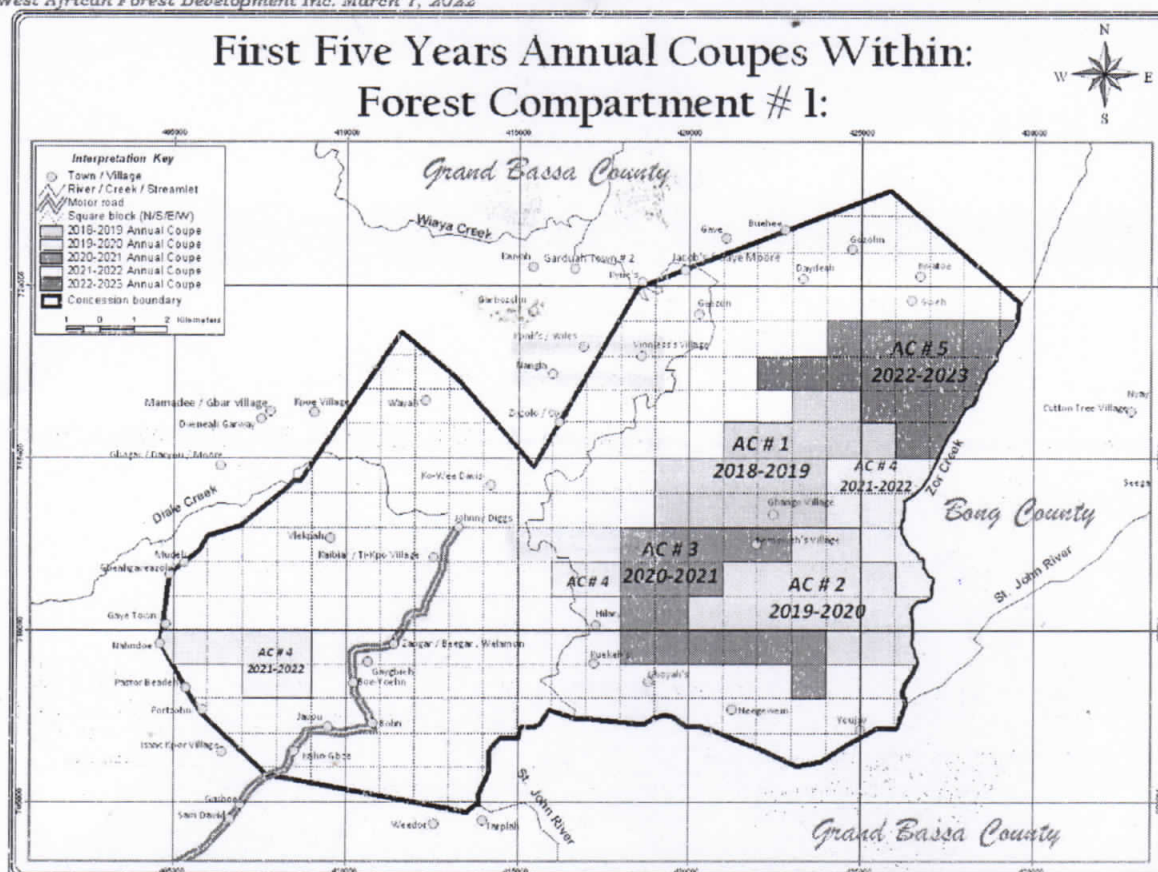


Figure 6: Location of Annual Coupes #1 to 5 on Compartment One

6.3 Logging Management Rules

- Physical Demarcation of Compartment One & the AC Boundaries

Gheegbarhn #1 Community Forest has been under management by WAFDI, since the 2018/ 2019 Logging Season. And prior to the commencement of operations, the field demarcation of the boundaries of the concession, and that of compartment one was completed. Through its technicians, WAFDI has also completed the delineation of the five (5) annual coupes with Compartment One. Notwithstanding, we will continue to clean the boundaries lines for ease of recognition.

■ Pre-harvest Enumeration Methodology

A pre-requisite activity performed in the office making use of the 250,000 Topographic-based map of Liberia. Information drawn on the preliminary harvest planning includes:

- ✓ Coupe or compartment;
- ✓ Proposed road network;
- ✓ Riparian and/or stream buffer zones;
- ✓ Steep areas above 25°

Area Reconnaissance

- ✓ The purpose is to verify and update information contained in the preliminary harvest plan map
- ✓ This includes general information on the location of boundaries, road alignment, entry and exit points, bridges, culverts, stream buffer zones which under our Code for Forest Harvesting Practices is 30 meters, outcrop and other physical features that are verified in the forest
- ✓ A 100% aerial photography using GIS technology (pre – felling survey and mapping of topography, sites and growing stock) has already been carried out for all the areas to be harvested in order to provide the basic information for planning and preparation;
- ✓

Marking of Harvesting Trees

This operation is essentially an activity to mark all harvestable and non-harvestable trees (50cm to 120 cm dbh) in a comprehensive manner on the ground according to the following rules:

- ✓ Retain mother trees as seed source
- ✓ Retain all trees located within riparian reserves and stream buffer zones
- ✓ Retain trees with a top canopy of more than 50% of three height or a canopy size that will create a gap opening of more than 0.1 ha

▪ Rules Governing Logging Operations

WAFDI aims to manage Gheegbarhn #1 Community Forest for the benefit of all the affected communities. Management of the Forest will aim to ensure that all indigenous species and communities will survive and flourish across their natural range. Besides, the use of the Community Forest resources will be according to world-best practice. Standards will be maintained and improved by full implementation of the Revised Code of Forest Harvesting Practices, standard operating procedures (SOPs) and regulation on commercial logging activities. WAFDI's forest management operations will be sensitive to the cultural significance of District #2. We are hoping that the use of Gheegbarhn #1 Community Forest will contribute to the economic development and employment opportunities of the affected communities; and that forest management activities will be flexible and responsive to new information.

▪ Planning the Road Network

WAFDI's forest road consist of two parts: the sub-grade and the pavement (sub-base, base and surface). All roads in the Community Forest Project Areas are classified as either main road, secondary road or feeder road. All roads to be constructed have been marked on the ground by the new Camp Manager Mr. Labalan. We will retain trees with a top canopy of more than 50% of three height or a canopy size that will create a gap opening of more than 0.1 ha. Roads will be constructed to provide comfort and safety to the user, whilst reducing transportation costs, and minimize soil disturbance. All roads will be constructed according to the road designs and specifications required by the Revised Code of Forest Harvesting Practices of Liberia. More to that, approaches to bridges will be straight and level for a minimum distance of 10 meters on either side.

All parts of the bridge will be well anchored to prevent washing away. Stream banks adjacent to the bridge, on both the top and the bottom sides, will be stabilized using hard and durable logs, stones pitch or other equivalent construction

Besides, proper planning of skid and trails is crucial to minimize damage to the forest environment. Hence, skidding will be directed away from streams, minimize skidding distance, avoid skidding on steep slopes and crossing streams. Our skid trails will not exceed 10% of the harvested area. All skid trails will be marked on the ground prior to constructing them. Temporary log storage sites where possible will be constructed on road shoulders. Landings shall be ideally located on ridge tops to ensure uphill skidding. Landings in the Community Forest will be sloped 2-3° to allow surface water run-off towards drains. All landings will not exceed 200 hectares

6.4 Other Management Rules

Section 6.4 of the Guidelines for Forest Management Planning in Liberia exempts first five-year forest management plans from other logging rules. Therefore, these rules do not apply to this Plan, because it is the first Five-Year Forest Management Plan for the sustainable management of Gheegbarhn #1 Community Forest.

7.0 ACTIVITY FORECAST/ IMPLEMENTATION CHART

The 2021/ 2022 Logging Season is already ongoing; as such, the activities that WAFDI intends to carry out on Compartment One of Gheegbarhn #1 Community Forest during the logging season have been scheduled in Table Eight below:

Table 10: Planned Schedule of Logging Activities

Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
Demarcation of forest concession boundaries	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Demarcation of Compartment One & Annual Coupes boundaries																				
Pre-harvesting enumeration																				
Submission of the AOP																				
Road construction																				
Logging Activities																				