

Annual Operation Plan

(2021/2022)

For
ALPHA LOGGING & WOOD PROCESSING, INC.
Forestry Management Contract Area "A" (FMC-A)
Lofa and Gbarpolu Counties
REPUBLIC OF LIBERIA

Presented to:
Forestry Development Authority (FDA)
Monrovia, LIBERIA

Submitted by: Alpha Logging and Wood
Processing, Inc.



REPUBLIC OF LIBERIA
FORESTRY DEVELOPMENT AUTHORITY (FDA)

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REF: MD/155/2021/-1

December 6, 2021

Mr. Ho Yong Chau
General Manager
Alpha Logging & Wood processing Inc. (ALWP)
Rehab Junction, Roberts field Highway Paynesville
Republic of Liberia

Dear Mr. Chau:

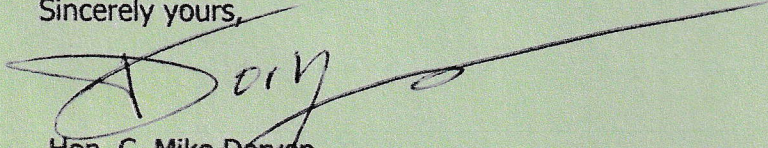
The Management of the Forestry Development Authority extends compliments and writes to inform you that after a thorough review of **Alpha Logging & Wood processing Inc. FMC-"A" Annual Operation Plan 2021-2022** by the joint technical team comprising of the Commercial Forestry Department, Community Forestry Department, Legality Verification Department (LVD), 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, is 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 Practice in Liberia.

Kind regards.

Sincerely yours,


Hon. C. Mike Doryen
MANAGING DIRECTOR

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


CMD/JJT/WBP/PFD/stb

1.0 Executive Summary

The forest resource of Liberia is one of the major contributing factors for socio-economic growth and future prosperity for the benefit of the Liberian people and government. The project area for which this Annual Operations Plan is written is called Forest Management Contract Area "A" (FMC - A) in Lofa and Gbarpolu Counties over which a Concession Agreement has been granted by the Forestry Development Authority (FDA) of Liberia to conduct logging operations in such manners that will achieve the stated socio-economic objectives of this FMC.

By virtue of the Social Agreement (SA) signed between Alpha logging and the counties concerned, ALWP would undertake to carry out all aspects of the logging operations for the achievement of the stated objectives of the FMC. This Annual Operational Plan (AOP) of ALWP presents a number of strategies that highlights the major activities to be undertaken for the annual operational period for 2021/2022."


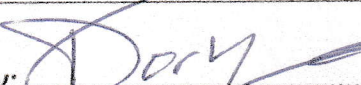
We would however continue the harvesting of blocks started and stopped, due to the heavy downpour of rain and also some blocks approved in the past but yet to be harvested. The maps of these blocks are provided as an attachment.

The AOP further describes best pre-harvesting, harvesting and post-harvesting practices, equipment machinery and manpower allocation, forest infrastructure development, construction and maintenance, EIA and environmental management plan, and mechanism for the protection of cultural sites and wildlife habitats.

The provision of basic social services for affected communities and the impact of logging operations and the environment are also addressed. The necessary monitoring framework has been put in place to prevent illegal activities such as chain sawing, mining, among others in the contract area. The identification of risk and how they can be reduced whenever they occur are described in the matrices.

In short, the plan provides the strategies for the implementation of best forest harvesting practices; proper management of the project area; provision of basic social services while at the same time guaranteeing the health and safety of workers for efficiency and work quality.

2.0 DOCUMENT RECORD SHEET

DESCRIPTION	INFORMATION
Name and contact address of contract holder	Alpha Logging Rehab Junction, Robertsfield Highway, Paynesville, Liberia
Contract reference number	FMC-001
Strategic Forest Management Plan reference number	First Version
Contract effective date	September 17, 2009
Strategic Forest Management Plan date of approval	09/17/2009
Five-Year Forest Management Plan Reference number	5-YFMP #01
5-YFMP date of approval	09/17/2009
Annual Operational Plan Reference Number	AOP #4
Period covered by AOP	2021/2022
Date of Submission to FDA for approval	October 1, 2021
Date of AOP submission to FDA for approval; and signatures	November 30, 2021
Prepared by:  Mr. Ho Yong Chau (General Manager, ALWP)	DATE November 30, 2021
Approved by:  Mr. C. Mike Doryen (Managing Director)FDA	DATE Dec 23, 2021

3.0) REFERENCES

3.1) Location of the Annual Coupe on the FMC area

The Annual Coupe is located in compartment 1, bordering west of compartment 4 at the top and a distance of 1 km South at the St Paul river bounding Alpha Concession.

✓ **The Order of Passage within Planning Schedule:**

the planning timetable of this Annual Operation Plan captures the assessment of all relevant information concerning Alpha Logging & Wood Processing, Incorporated in addition to planning of forest management activities that involves the economic, environmental and social principles/values of the forest. These principles or values include but not limited to:

- **Social Values:** *demonstrates the protection and wellbeing of the people.*
- **Economic Values:** *several factors can be considered: stable employment opportunities, processing and trade of forest products and energy; investments in the forest sector with quality productivity etc.*
- **Environmental Values:** *ecological functions such as carbon storage, nutrient cycling, water and air purification, and maintenance of wildlife habitat. Social and cultural benefits such as recreation, traditional resource uses, etc.*

The order also entails the effectiveness and implementation of plan, as well as various activities to be carried out: prospection, enumeration, harvesting, and maintenance of equipment, with respect to standards financial and managerial practices for the sustainability of forest management.

✓ **Location within the FMC**

Is located in compartment 1, bordering west of compartment 4 at the top; and a distance of 1 km South at the St Paul river bounding Alpha Concession.

Brief History of our Annual Operation Plan (AOP)

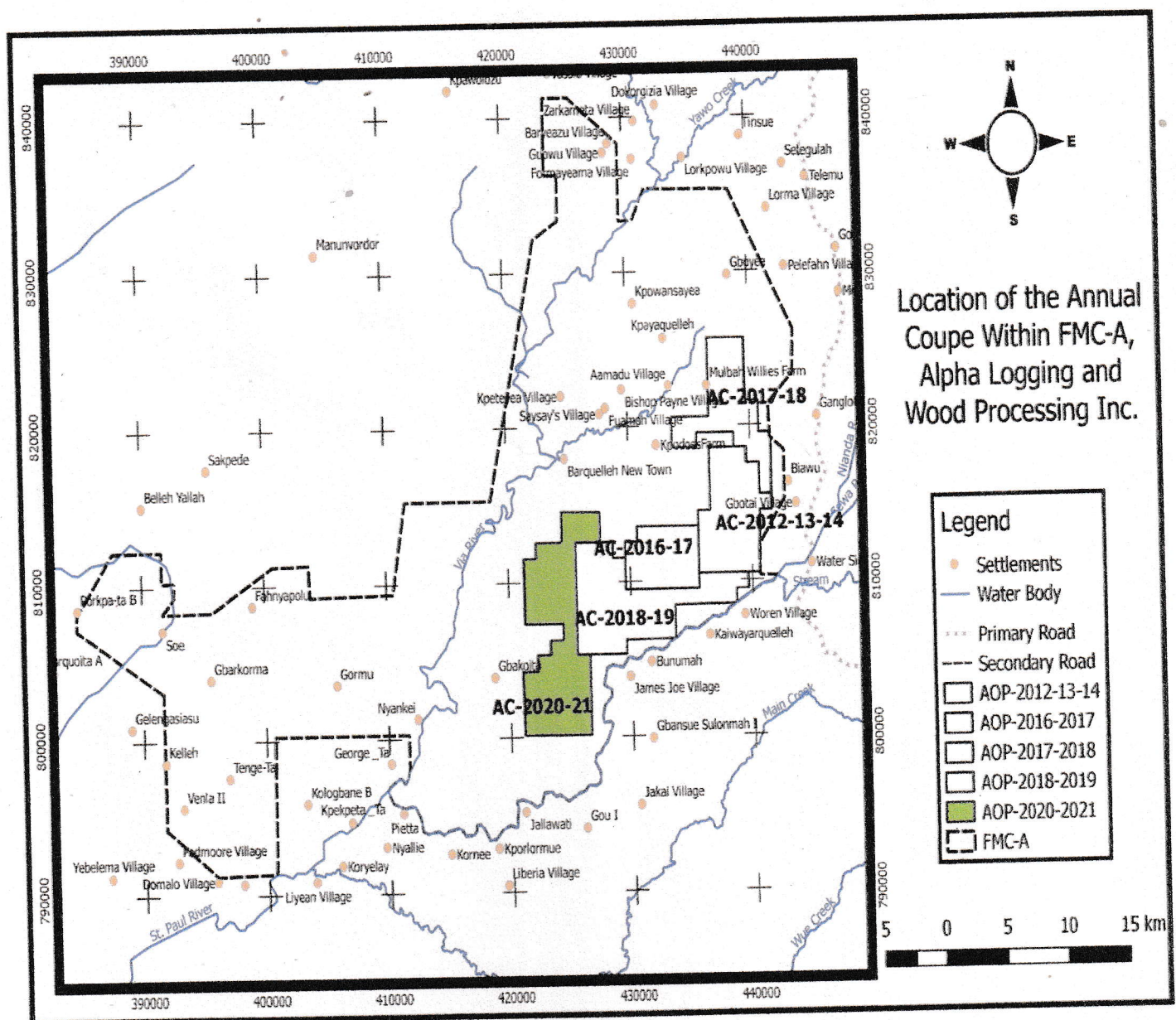
Due to the deadly Ebola virus that devastated our country and by extension our operations, coupled with other unforeseen circumstances that impaired our logging activities for some protracted period,

We could not complete some of our AOP; thereby, carrying left out blocks forward for the next AOP respectively.

Our Annual Operation Plan covers forty eight (48) blocks as required by FDA regulations/Code of harvesting practice.

However, we have adjusted and planned to complete all left out blocks this 2021/2022 harvesting season; so as to kick start a fresh Annual Operation Plan beginning 2022/2023 and thereof.

Holding all factors constant, is our anticipation to complete all required blocks approved by FDA going forward. We are sorry for any inconvenient it may had caused.



3.2) DESCRIPTION OF THE ANNUAL COUPES

✓ *Boundaries and Surface Area*

The 2021/2022 Annual Coupe of Alpha Logging Contract Area has a total gross area of 4,800 hectares. Each block contains 100 hectares measuring 1,000 meters x 1,000 meters, the equivalence of which is 1 square kilometer. During the inventory in FMC-A and satellite image analysis, 15% of the surface area represented the agriculture units. There are few human settlements observed in the annual coupe area.

However, the exclusion zone; water courses, slope gradient above 40 degree, protected species and cultural sites will be marked and excluded in the course of the block cutting and enumeration which is still in progress. The points/coordinates are displayed in the table below:

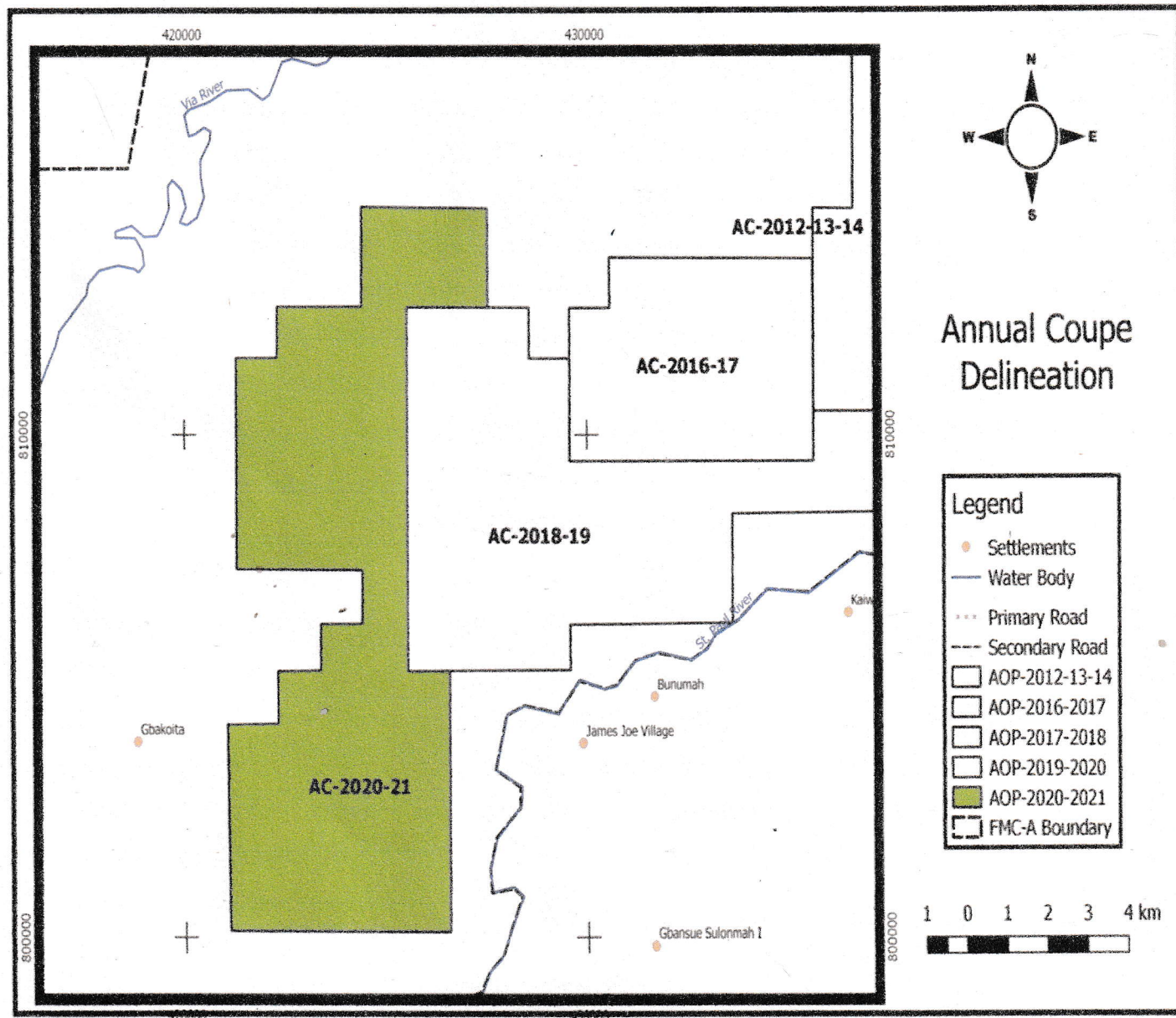
✓ *Criteria for sectioning into annual coupes*

The regulations of the Forest Management Authority permits Alpha Logging & Wood Processing, Incorporated (FMC-A) to carry on 100% inventory doing enumeration for every harvesting season, and a plan guideline for diameter class limit at DBH.

✓ *TABLE:*

Way_Point	X_COORD	Y_COORD	ID
637	424428	817615	A
643	424408	811544	B
599	423390	811550	C
588	423347	800117	D
754	426577	800105	E
753	426583	801113	F
761	427533	801099	G
1264	427530	804232	H
1263	427942	804226	I
1262	428575	804562	J
1261	428577	805295	K
666	425539	805285	L
673	425543	812557	M
775	427548	812556	N
780	427554	817587	O

✓ **MAP#2: ANNUAL COUPE DELINEATION**



✓ **Specificities(Biophysical & Social economics)**

i. **Biophysical Background (Soil & Topography)**

The Soil and Topography of Alpha Logging and Wood Processing Inc. contract area; characterized with series of parallel ridges separated by broad-floored valleys. The ridges generally rise about 200M above the valley floors and trend northeast. Hill slopes and predominantly gentle and relief is subdued. The few sharp ridges owe their configuration mainly to the presence of resistant leads to iron-formation; Rivers follow the regional trend, the Via River providing the principal drainage.

- *Water Courses: The FMC Area "A" watercourses covers approximately 17,281 hectares.*

This was estimated from the forest inventory transit report.

- *Relief: height and Slopes: the estimated inventory plot result provides that the steep slopes over 30° covers 1,728 hectares.*

At FMC-A, there are lots of impacts being made with respect to social economic activities within the affected communities. These include but not limited to: construction of bridges, roads to markets, scholarship implementation in compliance with the Social Agreement, royalty payment, etc. However, we give first preference to qualify and competent community's dwellers when it comes to recruitment of staff; considering the waving economic challenges and in fulfillment of the social agreement, to improve their livelihood condition for efficiency and productivity.

ii. Forest Stratification with table

The Annual Coupe of Alpha Logging & Wood Processing, Incorporated has been divided or arranged into blocks and subdivided into two categories: (1) harvestable area & (2) non-harvestable area. The total harvestable area covers 4,080 ha that constitutes 85%; and the non-harvestable area constituting 15% of the surface area.

See below table:

<i>Land Cover Type</i>	<i>Surface (ha)</i>	<i>% of the total area</i>
<i>Total harvestable area(forest land cover)</i>	<i>4,080</i>	<i>85%</i>
<i>Total non-harvestable area</i>	<i>720</i>	<i>15%</i>
<i>Total</i>	<i>4,800</i>	<i>100</i>

✓ FUANA

We have variety of vertebrate species that are found in our concession area within the parameter of rivers and dry land, which include fishes, birds, mammals, amphibians, etc. The management of the flora and fauna environment includes multiplicity of structures with maintenance of exclusion zones, buffers and forest cover types.

✓ **Social- economic Background**

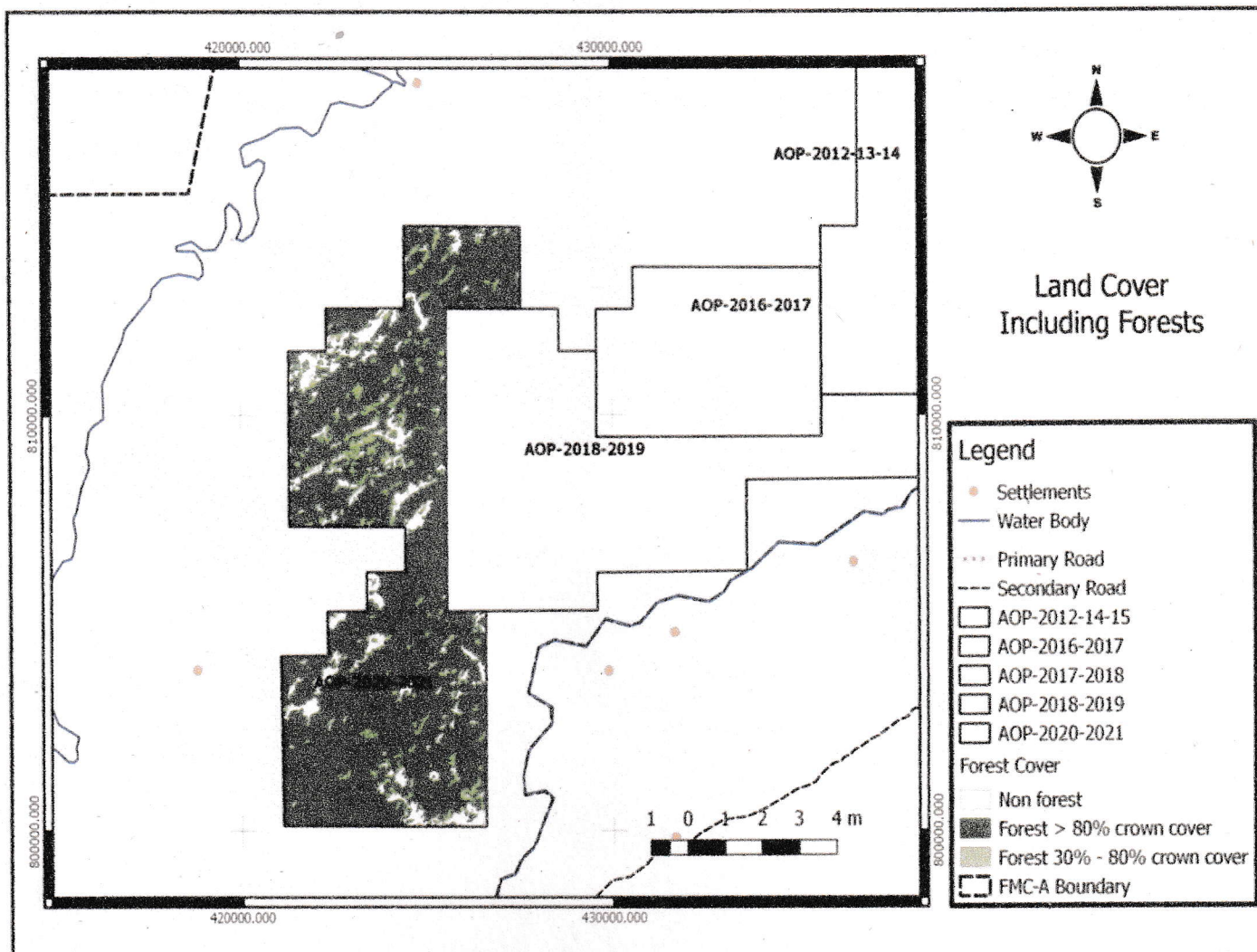
i. **Demography Description**

This information was provided in the Bid Document but seems to be more of anecdotal in nature. They are more or less interpolated based on the social-economical sampling assessment. The survey conducted during the exercise shows that the estimate population is 12,902 persons of both males and females in fifteen (15) towns, including targeted and satellite villages from different ethnic background of whom the Loma tribes dominates about 50%.

ii. **Human Locations(villages & settlements)**

There are many towns and villages that fall within the parameter of our concession areas, some of whom are: Beyan town, Gbelayea, Kpayaquelleh, Gbonyea, Wadala etc.

Map #3: See below Land Cover and forest Classes within the Annual Coupe



iii. Infrastructure

With respect to infrastructure development or social responsibilities towards the affected communities, Alpha had built about 40km community roads and bridges including (Gbonyea, Kpayarquelleh, Kpowansanyea etc..)

Alpha had also built four (4) hand-pumps in Beyan town and Gbelayea with others to follow during the coming logging season. Recently, constructed a concrete bridge over Wadala near Gbonyea town; and also, opened 40km road from Mulbah Willie Farm to Kpayaquelleh Town.

The payment of the royalty or cubic meter fees and the scholarship are to some greater extend being settled.

iv. Local Community Activities

The dwellers within our concession area are mostly farmers. They do subsistence farming as a means to end living. Some key areas of production are: cassava, rice, plantain, pepper, etc produced by communities' dwellers. Other involved with the production of tree crops, including palm oil and rubber. Furthermore, there are other Non- Timber Forest Products that are produced, including: palm wine, honey, bush meat, etc. and are used mostly for commercial purposes.

✓ ***The management Units within Annual Coupe four (Table 4) and map***

The total harvestable area covers 4,080 ha that constitutes 85%; and the non-harvestable area constituting 15% of the surface area.

<i>Unit #</i>	<i>Land use affection</i>	<i>Description</i>	<i>Surfaces Area(ha)</i>	<i>%</i>
<i>0.1</i>	<i>Harvestable area</i>	<i>Logging activities</i>	<i>4,080</i>	<i>85%</i>
<i>0.2</i>	<i>Total non-harvestable area (protection, agriculture, conservation, etc)</i>	<i>Wildlife, buffers, sacred areas, etc.</i>	<i>720</i>	<i>15%</i>
<i>Total</i>			<i>4,800</i>	<i>100%5</i>

3.3. Annual Audit Report

Review of past Activities

In the course of the 2020/2021 harvesting season, Forty-four (44) blocks were approved for re-entry; and we completed thirty-six (36) blocks; and the remaining eight (8) blocks are currently ongoing. For any unforeseen circumstances that will cause us not to complete said blocks below; we will begin with the balance for AOP 2021/2022 harvesting season:

FF-37, FF-38, FF-39, FF-40, JJ-39, GG-45, GG-47 & GG-48

Furthermore, please find below proposed FORTY-EIGHT (48) blocks for AOP 2020/2021. These blocks have been verified & approved by LVD and pending full approval from FDA. However, Twenty two (22) blocks out of the FORTY-EIGHT blocks were approved by FDA, and the balance Twenty Six (26) are yet to be approved for the period of 2020/2021 harvesting season. The Twenty Two (22) blocks that were approved by FDA are currently ongoing felling; and we will continue with these blocks for AOP 2021/2022 harvesting season as re-entry blocks; as we nearing the completion of our AOP for 2020/2021 harvesting season. Kindly see below approved twenty two (22) blocks currently ongoing felling:

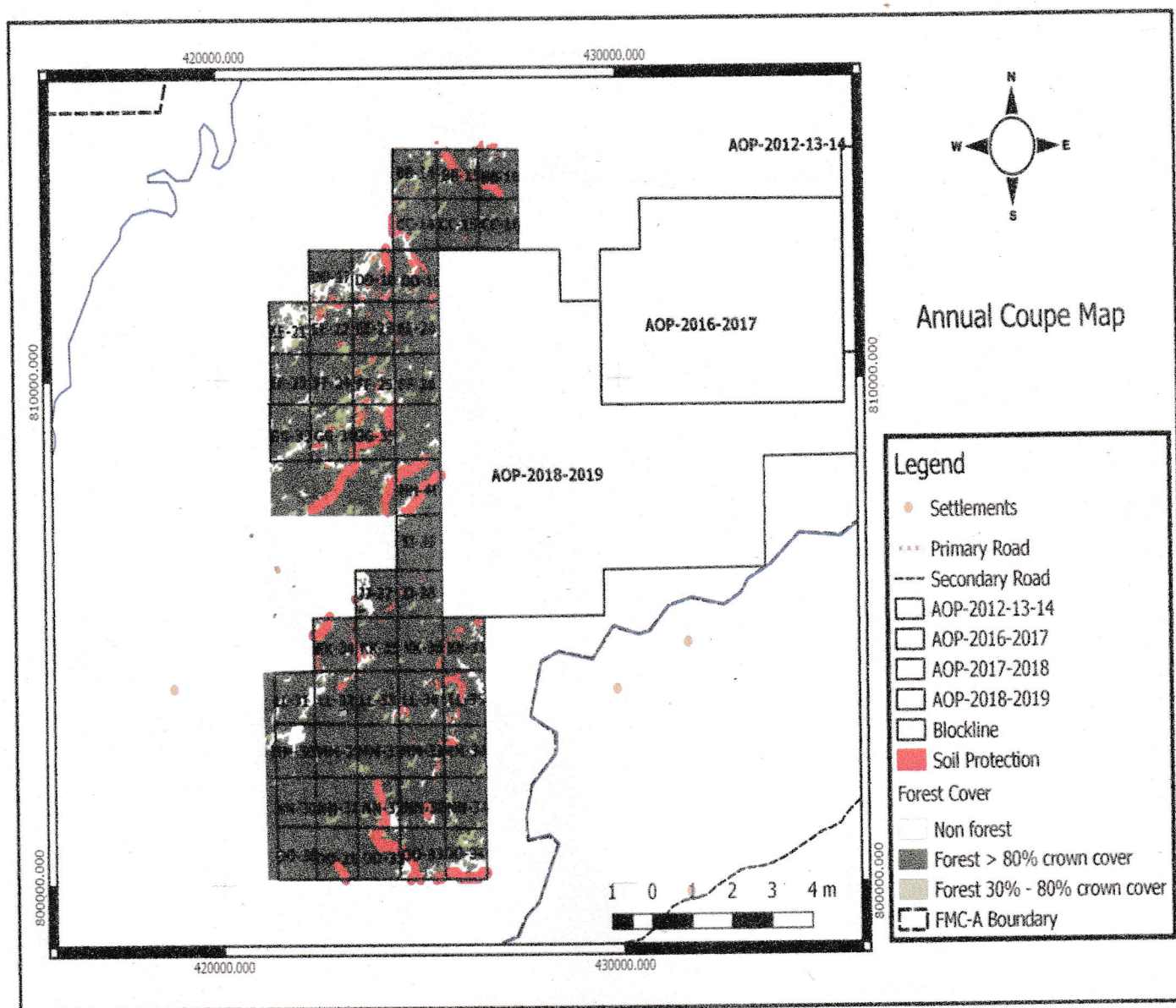
**EE-24, GG-35, HH-40, II-39, KK-35, KK-36, KK-37, LL-32, LL-34,
LL-35, MM-31, MM-32, MM-33, MM-34, NN-31, NN-32, NN-33, NN-34,
OO-31, OO-32, OO-33, and OO-34.**

ALSO, we will commence the twenty six (26) blocks for our AOP 2021/2022 that are yet to be approved by FDA. These blocks are:

**BB-14, BB-15, BB-16, CC-14, CC-15, CC-16, DD-17, DD-18, DD-19, EE-21,
EE-22, EE-23, FF-23, FF-24, FF-25, FF-26, GG-33, GG-34, JJ-37, JJ-38,
KK-34, LL-31, LL-33, MM-30, NN-30 & OO-30.**

With regards to safety and environmental issues, we have sought the expertise of F.E.R.I. to conduct an environmental impact assessment in the camp as well as in the bush; the outcome of this exercise had not been received at the time of compiling this plan. But, notwithstanding We will endeavor to improve or rectify whatever lapses they might report.

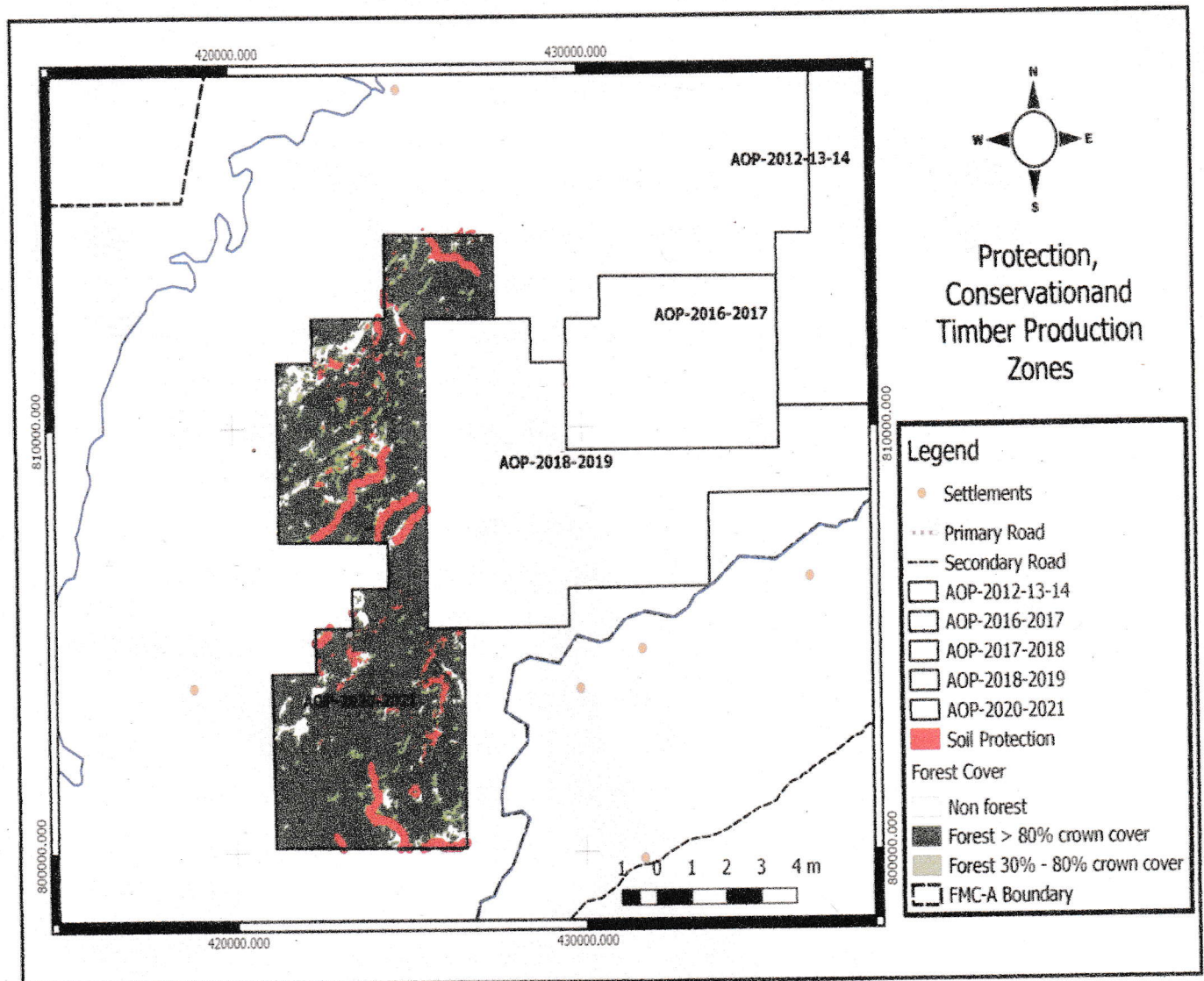
Map 4: Annual Coupe map



FMC-A proposed AOP (2020/2021) blocks, now; 2021/2022

Nº.	BLOCK	BLOCK NUMBER
1.	BB	14, 15, 16
2.	CC	14, 15, 16
3.	DD	17, 18, 19
4.	EE	21, 22, 23, 24
5.	FF	23, 24, 25, 26
6.	GG	33, 34, 35
7.	HH	40
8.	II	39
9.	JJ	37, 38
10.	KK	34, 35, 36, 37
11.	LL	31, 32, 33, 34, 35
12.	MM	30, 31, 32, 33, 34
13.	NN	30, 31, 32, 33, 34
14.	OO	30, 31, 32, 33, 34

**Map 5: Annual Coupe protection
Consevation and Timber production**



4. 0) PRE-HARVEST ENUMERATION RESULTS

4.1 METHODOLOGY

The Liberia Code of Forest Harvesting Practices provides the rules/ guidance for the operation of the annual coupe in the few following procedures:

- *The annual coupe area is divided into Km-square blocks to enhance the work of the inventory crews.*
- *100% forest inventory of the blocks with marking, tagging and recording of all the trees above 50cm DBH.*

4.2 CRITERIA FOR HARVESTABLE TREE SELECTION

The general rule is 100% inventory in the blocks earmarked for annual coupe. However, the following criteria are observed in the selection of harvestable trees.

- Diameter cut limit is strictly observed; only trees above the required diameter are harvestable.
- Bad quality trees may not be felled: this is often the decision of the company. Any tree that is felled should be hauled and billed. In such a case we will ignore felling bad quality trees.
- Location of the tree is considered during harvesting(protected areas or buffer/exclusion zones)
- The market demands will play a major role in the selection of species to be harvested.
- The benchmark set by the Liberia Code of Forest harvesting Practices is to harvest a maximum of 30 m³/ ha on each block.

4.3. RESULTS

SPECIES DIAMETER CLASSIFICATION BASED ON 22 BLOCKS APPROVED:

(EE-24, GG-35, HH-40, II-39, KK-35, KK-36, KK-37,
LL-32, LL34, LL-35, MM-31, MM-32, MM-33, MM-34,
NN-31, NN-32, NN-33, NN-34, OO-31, OO-32, OO-33,
and OO-34)

Table: 3

NO	SPECIES CODE	50 to 59	60 to 69	70 to 79	80 to 89	90 to 99	100 to 114	115 to 124	125 to 134	135 & above	TOTAL	ESTIMATED
1	FAG	5	3	9	0	2	0	0	0	0	19	123.5
2	GLU	3	2	2	0	0	1	0	0	0	8	52
3	GUA	0	2	1	2	0	0	0	0	0	5	32.5
4	HAN	15	17	9	4	1	2	0	0	0	48	312
5	HAP	5	12	10	2	0	2	0	0	0	31	201.5
6	IRV	1	4	3	1	0	1	0	0		10	65
7	KHI	2	0	4	0	0	1	0	0	0	7	45.5
8	KLA	10	26	15	0	5	3	0	0	1	60	390
9	LOV	1	6	11	4	2	2	0	0	0	26	169
10	MAM	11	15	7	8	0	2	0	0	0	43	279.5
11	MAN	45	3	0	0	0	0	0	0	0	48	312
12	MON	300	108	14	0	9	0	1	0	0	432	2,808
13	NAU	12	8	10	5	0	2	0	0	0	37	240.5
14	NES	1	1	0	0	0	1	0	0	0	3	19.5

15	NEW	22	12	3	0	0	2	0	0	0	39	253.5
16	OLD	100	83	47	15	4	0	3	0	0	252	1,638
17	ONG	21	55	37	5	4	0	3	0	0	125	812.5
18	PAC	17	10	8	2	0	1	0	1	0	39	253.5
19	PAK	295	340	86	30	0	2	0	2	0	755	4,907.5
20	RIC	2	17	8	5	0	0	0	0	0	32	208
21	SAB	1	4	1	0	0	0	0	0	0	6	39
22	SAC	40	75	37	20	4	1	0	2	0	179	1,163.5
23	SAM	34	23	8	1	0	0	0	0	0	66	429
24	TET	7	4	0	0	3	0	0	0	0	14	91
25	UAP	500	415	100	16	0	3	0	0	0	1,034	6,721
26	UNK	23	24	19	9	5	2	0	0	0	82	533
27	XYL	30	58	57	30	8	2	0	1	0	186	1,209
28	LOP	200	250	360	370	210	80	27	9	1	1,507	9,795.5
29	DID	45	90	74	30	12	7	4	1	0	263	1,709.5
30	HAL	61	44	19	3	0	0	0	0	0	127	825.5
31	PIP	215	700	850	738	487	180	12	16	2	3,200	20,800
32	PAR	615	877	688	290	39	5	0	0	0	2,514	16,341
33	TAR	153	66	9	6	0	0	5	0	0	239	1,553.5
34	RHO	9	12	9	1	0	0	0	0	0	31	201.5
35	ENTA	0	0	1	2	0	0	0	0	0	3	19.5
36	ENTU	5	10	2	4	2	4	0	1	0	28	182
37	BUS	26	10	1	7	0	0	0	0	0	44	286
38	ANH	46	90	55	15	2	0	1	0	1	210	1,365
39	AFZ	14	35	14	2	2	5	0	1	0	73	474.5
40	DIA	50	35	17	8	0	2	10	0	0	122	793
41	ERY	157	310	215	110	7	6	0	1	0	806	5,239
42	GIL	100	50	112	15	4	1	6	0	1	289	1,878.5
43	PER	6	14	3	1	0	0	0	0	0	24	156
44	PENT	35	28	9	2	0	0	0	0	0	74	481
45	PEN	1	1	0	0	0	0	0	0	0	2	13
46	TEI	40	60	34	20	0	2	0	0	0	156	1,014
47	TES	43	65	30	3	1	0	0	0	0	142	923
48	PYC	106	154	120	35	5	3	0	0	0	423	2,749.5
49	AFRO	1	1	1	0	0	0	0	0	0	3	19.5
50	ALB	25	30	50	20	15	5	0	1	0	151	981.5
51	ALS	3	16	6	7	0	1	0	0	0	27	175.5
52	AMP	21	64	51	43	7	3	0	0	0	189	1,228.5
53	ANO	90	160	60	37	16	5	0	1	0	369	2,398.5
54	ANT	3	13	11	12	5	7	1	0	0	52	338
55	ANI	0	0	1	1	0	3	0	0	0	5	32.5
56	AUB	6	3	10	9	4	6	2	2	0	42	273
57	BEI	0	5	1	1	0	0	0	0	0	7	45.5
58	BOM	12	28	20	11	1	2	0	0	0	74	481
59	BRI	2	2	0	0	0	0	0	0	0	4	26
60	CHL	68	127	118	60	16	4	2	0	0	395	2,567.5
61	CAL	117	95	25	4	0	0	0	0	0	241	1,566.5
62	CAN	11	46	40	52	25	20	3	1	1	199	1,293.5
63	CEI	7	19	27	31	40	50	21	17	3	215	1,397.5

64	CHR	20	22	8	2	0	0	0	0	0	52	338
65	COM	17	31	14	2	1	0	0	0	0	65	422.5
66	COP	0	1	0	0	0	0	0	0	0	1	6.5
67	COU	11	5	0	1	0	0	0	0	0	17	110.5
68	CYN	2	0	0	0	1	0	0	0	0	3	19.5
69	DAC	4	5	1	0	0	0	0	0	0	10	65
70	DAN	2	3	9	4	1	0	1	0	0	20	130
71	DIS	16	15	11	2	0	1	0	1	0	46	299
72	ENTC	2	0	0	1	0	0	0	0	0	3	19.5
73	ENTCY	1	0	0	0	0	4	0	0	0	5	32.5
74	ERYM	0	1	0	0	0	0	0	0	0	1	6.5
Total		3,826	4,861	3,573	2,121	950	423	102	57	10	15,923	103,499.5

NOTE: the volume is calculated based on an average of 6.5m³/ tree.

4.4 Respects for the Annual Coupe Rules

Alpha Logging shall seek to achieve proper management of the project area for the following purposes and objectives:

- Production of merchantable timber on sustainable basis while at the same time for the protection of the inherent forest resources for environmental, social and economic benefits for all stakeholders;
- Plan, construct and maintain forest infrastructure such as roads, bridges, culverts, skid-trails and log landings where required;
- Observe environmentally sensitive areas for protection (e.g. river, buffer zones and wildlife habitats) that may be identified during pre-harvesting survey works;
- Application of best timber harvesting techniques for efficiency and cost effectiveness while eliminating or minimizing the adverse impacts of logging;
- Application of appropriate environmental-friendly management practices and monitoring for impact mitigation.

ALWP intends to sustainably manage the forest resources of the contract area in order to enable the forest resources to continue providing environmental, social and economic benefits to all stakeholders including future generations.

5.0 PLANNING OF WORKS

5.1 PLANNING OF LOGGING ACTIVITIES

- *Planning of the road network, the bridges and landings*

The equipment and machinery requirement for road building, felling/bucking, skidding, loading and hauling operations together with their correspondent specifications (model/make and quantity) are presented below.

- *Procedures for planning and monitoring of the logging operations*

Prospection, enumeration, felling, skidding and transportation will continue throughout the process of the revised code of Forest Harvesting Practices of Liberia. We, the management of Alpha Logging and Wood Processing, Incorporated have always done 100% inventory in compliance to the regulations of the code of harvest practices. We usually planned at head of time so as to give us a better outcome of the harvesting season. With respect to monitoring logging operations, there are method put in place to carry on proper evaluation and monitoring to ensure that the right things are done in fulfillment of the regulations of the Forestry Development Authority.

- *Harvest monitoring and post-harvest diagnosis*

i. Post Harvest Diagnosis and Field Controls

Throughout the logging season, road is one of the key priorities that increases productivity for concessionaires and by extension benefits immensely the dwellers within and around the concession. It creates easy access to transport commodities from one point to another. In view of the above, Alpha Logging and Wood Processing had constructed and continue to construct road with in the affected communities that is bringing economic relief in her concession. We are aware the rehabilitation of logged areas is required to prevent further corrosion of logging area, soil and water values to support forest transformation.

ii. Post Harvest Activities

- *Management of KM-Square Block closure*

In fulfillment of the revised Code of Harvesting Practices, blocks shall be closed upon the completion of the harvesting season; and in full compliance with the stipulated timeline within the Annual Harvesting Certificate given by the Management of Forestry Development Authority. A re-entry may be requested for blocks not completed or entered during the previous harvesting season.

- ***Road Maintenance and Closure***

The primary and secondary forest road network at Alpha Logging & Wood Processing, Incorporated have always been maintained in good form. Road that are undergoing construction works that are not to be used shall be closed to all traffic by blocking the runaway with big logs.

- ***Measures to mitigate Natural Impacts***

Realistically, Natural Impacts shall be alleviated as long they are bumped into in our scope of operations.

5.2 Planning of other Activities

- ***Silvicultural Activities:*** *prescriptions to regenerate and restore indigenous species at all areas affected by harvest-related activities (landing, skid trails and roads).*
- ***Social Program:*** *entails better preparation for sustainable Forest Management of Alpha Logging & Wood Processing, Incorporated and cognizance that the Entity Or Company must protect all social, economic and environment norms for sustainability; and respect for the rules of law at all levels.*

- ***Environmental Program***

Agriculture units, protection/conservation have been recognized on the land area and boundaries or precincts established. The below include but not limited to, sacred areas, wildlife corridors as well as water bodies etc. they are known as the harvestable and non harvestable areas. We have also recognized buffer zones between areas that are harvestable and non harvestable within our Annual Plan. The river supports important aquatic and terrestrial plants and animal species, and is important to the economic viability as well. Moreover, buffer zone with a radius of at least 50cm around the perimeter of the water body will always be recognized.

5.3) ACTIVITY PLANNING / IMPLEMENTATION CHART

Table plan schedule of Logging Activities: 2021/2022

Alpha Logging has prepared this Annual Operational Plan in compliance with one of the requirements for timber trees harvesting. It outlines some of the major logging activities to be carried out during the 2021/2022 logging season in FMC-A.

Alpha Logging has put in place the necessary institutional framework to improve forest management and conservation in order to address social, economic and environmental issues. The company will conduct Logging operations in a manner that guarantees sustainable forest management in the contract area. Additionally, the company shall involve local community dwellers through existing Community Forestry Development Committees (CFDCs) in planning and implementing development projects for their benefit.

Finally, Management will provide basic social services, while at the same time ensuring that the health and safety of workers will be guaranteed to enhance efficiency, maximum productivity and job security.

TABLE

[illegible]

Table Plan Schedule of Logging Activities

Table:

Activities	Equipment Type	No. of Units	Remarks
Felling/skidding	Cat D6D	28	
	Chainsaw Stihl 070	28	
Road Construction/Maintenance	Cat D6D	6	
	Motor Grader 12G	1	
	Excavator EX320	1	
	Dump Truck	3	
	Road Compactor	1	
	Chainsaw Stihl 070	3	
Log Loading/Unloading	966F	3	
Log Hauling	MB 3836 Logging Truck	15	
Transport/General Services	Oil Tanker	1	
	4WD Pickup	6	
	Crane Truck	1	
	Lowbed Trailer	1	

MANPOWER AND LOCALIZATION

	<i>Expat</i>	<i>Local</i>	<i>Total</i>	<i>Expat Ratio</i>
<i>Managerial</i>	5	3	8	63%
<i>Professional/ supervisor</i>	6	5	11	54%
<i>Skilled/ Technical</i>	20	72	82	24%
<i>General workers</i>	0	90	90	0%
<i>Estimated Total</i>	31	170	201	15%

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