



REPUBLIC OF LIBERIA
FORESTRY DEVELOPMENT AUTHORITY (FDA)

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REF: MD/0257/2022/-1

October 26, 2022

Jihad Y. Akari
General Manager
Euro Liberia Logging Co.
Congo Town, Old Road
Monrovia, Liberia

Dear Mr. Akari:


The Management of the Forestry Development Authority extends compliments and writes to inform you that after a thorough review of **Euro Liberia Logging Company Annual Operation Plan** by the joint technical team comprising of the Commercial Forestry Department, Community Forestry Department, Conservation Department, Legality Verification Department (LVD), 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 these Plan, are prescribed in the Template formulated by 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

SSAI  
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FORESTRY DEVELOPMENT AUTHORITY

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MEMORANDUM

To: C. Mike Doryen
Managing Director
Forestry Development Authority

Thru: *[Signature]*
Joseph J. Tally *[Signature]* 26-10-22
Deputy Managing Director/Operations

From: William B. Pewu *[Signature]*
Technical Manager/Commercial

Subj: **Report on the Review of Euro Liberia Logging Company (FMC"F")
2022/2023 Annual Operation Plan.**

Date: October 26, 2022

The Technical Review Committee set up by the Management of the Forestry Development Authority (FDA), comprising various Departments, is pleased to extend sincere sentiments and also submit to your office the report on the Revision of **Euro Liberia Logging Company 2022/2023 AOP**. Following a thorough scrutiny of the Document, it was observed that the basic requirements enshrined in the Guidelines for Forest Management Planning in Liberia, and the Revised Code of Forest Practices were met.

Therefore, we recommend the approval of the AOP in favor of **Euro Liberia Logging Company** having met all requirements.

Please see attached the Review Committee Report.

Introduction

A joint Technical Committee comprising of **Commercial Department, Legality Verification Department (LVD), Community Forestry Department, Conservation Department, and Research and Development Department (R&D)** of the Management of the Forestry Development Authority (FDA) reviewed the **AOP** submitted by **Euro Liberia Logging Company located in Grand Gedeh and River Gee Counties**. This plan is the prerequisite for the issuance of harvesting Certificate to forest contract holders, all required checklists as provided for in the Guidelines for Forest Management Planning in Liberia are complied with.

Objective

The Objective of the review is to ensure that this plan meets the requirements of the Guidelines, USAID/PROSPER Template set for Forest Management Planning in Liberia and the Amended Code of Forest Harvesting Practices

Methodologies

- Checked the quantity of information by comparing each Chapter, Map, and Table with the Amended Code of Forest Harvesting practices and the Guidelines for Forest Management Planning in Liberia
- Cross checked the accuracy of information with the operation Chain of Custody system and Legality Verification status provided in the Liber Trace.
- Comparing the harvesting of blocks to ensure its being in line with the Annual Operational Plan.

Observation

The joint Technical Review Committee observed that this plan meets the criteria set forth in the Guidelines for Forest Management Planning (USAID/PROSPER Template). Additionally, rectification on maps verification was done by GIS as required by the Template and Guidelines for Forest Management Planning.

Therefore, the joint technical review committee recommends that the **AOP of Euro Liberia Logging Company** be approved.

Members of the Review Committee are:

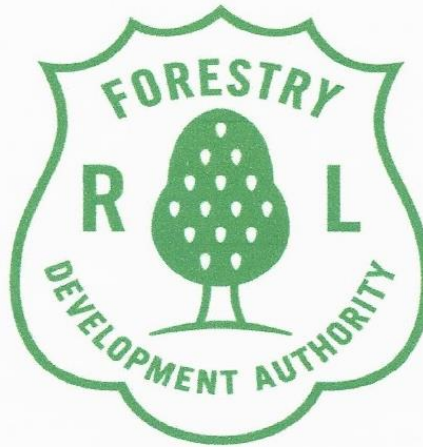
	Name	Position	Department	Signature
1	Stephen T. Botoe	TSC. Officer	Commercial	<i>S. Botoe</i>
2	John B. Warner	Senior TSC. Officer	Commercial	<i>J. Warner</i>
3	Ceasar Yancy	TSC. Officer	Commercial	<i>on the Field</i>
4	Obediah S. Bowah	Commercial Dept. Database Officer	Commercial	<i>on the Field</i>
5	Vernon S. Lloyd	EIA Officer	Commercial	<i>Work stop</i>
6	Gertrude B. Wilson	Community Forest Extension Officer	Community	<i>G. B. Wilson</i>
7	Benjamin N. Queminee	Park Biologist	Conservation	<i>on study leave</i>
8	G. Wrobeh Bledde	Inventory Officer	R&D	<i>[Signature]</i>

Attested: *[Signature]*
Paul F. Duo
National Authorizing Officer (NAO)



EURO LIBERIA LOGGING COMPANY
2022-2023 ANNUAL OPERATIONAL PLAN

Forest Management Contract Area (FMC "F")



Submitted To:
Forestry Development Authority,
Whein Town, Mount Barclay
Paynesville, Liberia

Date Submitted: Monday, October 3, 2022

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ACRONYMS

AC	Annual Coupe
Acs	Acres
AOP	Annual Operation Plan
DBH	Diameter at Breast Height
DCL	Diameter Cut Limit
FC	Forest Compartment
FDA	Forestry Development Authority
FMC	Forest Management Contract
GSV	Gross Standing Volume
Ha	Hectare
ELL	EURO Liberia Logging Company
MDCL	Minimum Diameter Cut Limit
NTFP	Non-Timber Forest Product
SFMP	Strategic Forest Management Plan
5-YFMP	Five Year Forest Management Plan

ACKNOWLEDGEMENT

This Fifth Annual Operational Plan (AOP) of Euro Liberia Logging Company has been compiled and prepared by Georges Akkari, Operations Manager, Euro Liberia Logging Company.

Information regarding the environment was provided by Ansumana Environmental Consultancy Inc., an independent Environmental Evaluator recognized by the Environmental Protection Agency of Liberia (EPAL). It can be recalled that AECI conducted the Environment Impact Assessment (EIA) Studies in Forest Management Contracts and Community Forest Areas. 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 data report of Mr. Thomas Davis, Director, LISGIS Geoinformation Department.

During the process of developing and preparing this Fifth AOP, financial support was provided by Euro Liberia Logging Company. The author is grateful to Mr. Jihad Y. Akkari, President & Chief Executive Officer (CEO), of Euro Liberia Logging for giving me the opportunity to work along with him and his support as well. The undersigned wishes to extend his thanks and appreciation to Mr. Timothy Toekoffa Wilson, Architect of the entire Forest Prospection, Survey & Operation Plans and all of the major Ten (10) towns and villages within the three (3) kilometres buffer radius of Euro Liberia Logging for their support.

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

SIGNED


Georges Akkari

OPERATIONS MANAGER

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EXECUTIVE SUMMARY

Euro Liberia Logging Company is European owned forestry business entity incorporated in 2004 and has been licensed to operate in the forest sector of the national economy. The company was pre-qualified by the FDA and has participated in a competitive bidding process for a large Forest Management Contract (FMC-F) in 2009. The bid was tendered on February 19, 2009 and was awarded the contract on September 17, 2009. This contract has been signed by the President of Liberia and ratified by the National Legislature in September 22, 2009. Since the Effective Date, the Company has made and is continuing to make frantic efforts in meeting up with her pre-felling requirements.

The development of this Fifth Annual Operational Plan (AOP) is a direct application of the Code of Forest Harvesting Practices. The conditions set forth in the code were taken into consideration while conducting the field studies and Forest Management Area "F". During the implementation of this AOP Euro Liberia Logging Company intends to work in the total of (102) One Hundred & Two regular and irregular blocks within the First Five Years Forest Compartment, FC#1. The Corporation will strictly observe the Rules and Regulations of the FDA, Guidelines on forest Management Planning in Liberia and Code of Forest Harvesting Practices in Liberia. These were given serious consideration in the development of the 2022-2023 Annual Operations Plan for the implementation of sustainable forest management practices in ELL's Forest Concession.

In this report, the Management of Euro Liberia Logging Company has presented the enumeration results of fifty (50) blocks in the Fifth Annual Coupe (AC-5). At this moment, thirty (30) blocks are, 100% fully identified and partially enumerated, and are expected to be approved by FDA/LVD when submitted for field verification. The block maps, Field Stock Survey Forms (SSF) and Sketch Maps will be submitted to FDA/LVD in days to come for approval from FDA.

The Management of Euro Liberia Logging Company use this opportunity to request Re-entry Permit rights to operate forty five (45) blocks during the 2022-2023 logging season. The below listed approved blocks were not completed during the 2021-2022 logging season due to the decline of the timber markets globally, coupled with the war in Ukraine and Russia and we wish to re-enter those forty five (45) blocks, they are: AA-6, AA-7, AA-8, AA-9, BB-7, BB-8, BB-9, CC-7, CC-8, M-13, M-14, N-13, N-14, N-15, N-16, N-17, N-18, N-19, N-20, O-11, O-12, O-13, O-18, O-19, P-13, P-20, P-21, R-20, S-19, S-20, T-18, T-19, U-10, U-11, U-15, W-5, W-6, X-3, X-4, X-5, X-7, Y-4, Y-8, Z-5 and Z-6.

The above listed approved Annual Coupe Blocks originates from the 2021-2022 Annual Coupe.

Also, during the 2021-2022 logging season, there were blocks surveyed, enumerated, verified and approved by the Forestry Development Authority but were untouched due to few factors: the collapse of the timber markets around the World. The emergence of COVID-19 pandemic to Liberia which prevented Euro Liberia Logging Company from carrying out normal operations in the Forest Concession and this led to the temporary closure of Euro Liberia Logging. Now that we have a semblance of stability within the industry and the little improvement of the market, Euro Liberia Logging wishes to bring forward those blocks that contain species in keeping with section 6 of the Guideline for Forest Management Planning on Opening Schedule, paragraph 4. Those untouched/brought forward blocks emanates from 2021-2022 Annual Coupe. Those blocks within the 2021-2022 Annual Coupe are: AA-4, AA-5, BB-6, CC-10, CC-11, CC-6, DD-

10, DD-6, DD-7, DD-8, DD-9, V-10, V-11, V-9, W-10, W-4, W-8, W-9, X-2, X-9, Y-5, and Z-4. We wish to work in the above untouched blocks during the 2022-2023 logging season pending the approval of the Authority.

This operational plan details the methods and conditions of operation for Forest Management Contract Area “F” with the Contract Holder being Euro Liberia Logging Company. The harvesting plan covers the normal methods of work, environmental, logistical and commercial considerations. This 2022-2023 Annual Operational Plan is a working document that has been prepared, understood, agreed to and to be used by people involved in forest operations in Forest Management Contract Area “F”.

The Plan further serves as important mechanisms for communicating responsibility for the implementation of interventions specified in the Company’s Five-Year Forest Management Plan.

Additionally, it includes a set of values, goals, objectives and actions that address economic, environmental and social aspects of sustainable forest management within the annual coupe. Euro Liberia Logging Company will strive to harvest the timber resources within the Annual Coupe sustainably, so that its derived benefits can be delivered into perpetuity. To achieve this, we will operate within the scope of all local, national & international regulatory frameworks to ensure sustainable management of the Coupe. It is important to note that all of Euro Liberia Logging Company timber harvesting operations will follow the recommendations for water quality protection and erosion control contained in the Revised Code of Forest Harvesting Practices of Liberia. This logging project will include construction of roads and bridges, access and haul roads, skid trails, landings etc.; construction of additional camp housing for project workers since indeed the company Fifth Annual Coupe is now located between Grand Gedeh and River Gee Counties; selective felling and cross cutting of commercial timbers; hauling and stockpiling, loading and transportation of logs in trailers etc. The project shall comprise of a value addition components.

Forest Management Decisions

The Management of Euro Liberia Logging has a vision to sustainably engage in commercial logging in keeping with the National Forestry Reformed Law of 2006 and its attending Regulations. In the discharge of its functions, the Management of Euro Liberia Logging Company believes in the professional judgment, within a set of broad guidelines and principles as stated above from time to time, to manage the forest resource along with the strict rules that must be followed. These guidelines and principles are spelled out in a number of publications and directives in our profile, and have also been described in this 2022-2023 Annual Operations Plan. The guidelines and directives set for Sustainable Forest Management by forestry experts whom every resource manager of Euro Liberia Logging considers during the preparation and implementation of forest management plans. Euro Liberia Logging Company operates Forest Management Contract Area "F", situated and lying in Grand Gedeh and River Gee Counties, Republic of Liberia. Therefore, the management decision is to harvest exotic and round logs from only blocks that have been approved by the Authority and adhere to all environmental standards.

Forest Management Planning

Standard Operating Procedures (SOP) being adapted for sustainable management of forests through efficient forestry operations and practices for inventory, felling, transportation and export as per the requirement of appropriate Government of Liberia and internationally accepted regulatory framework. Assessment procedures and standards to be used in the evaluation of forest operations and forest management within all Annual Coupes as per the approved SOP and Code of forest harvesting practices have been followed and worked in forests areas to maintain chain of custody and legality of forest products.

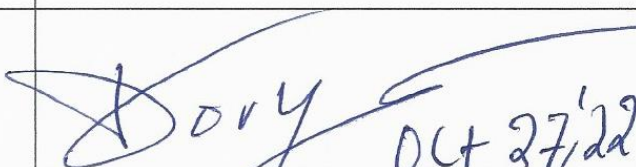
Blocks have been selected for enumeration based on preliminary survey so as to make sure that adequate quantity of logs are available for harvesting. Once a block is found suitable for enumeration, it was cleaned and adequately prepared for enumeration by cutting survey lines and boundaries. After successful enumeration for all the trees falling equal or more than 60 cm DBH including all marketable and non-marketable species, the block will be submitted to LVD for block verification and inspection and subsequent approval by FDA for harvesting. Once the harvesting permission is received, all the trees with equal or more than 60 cm DBH had been selected for felling and onward process for extraction, crosscutting, transportation to log-yard will be maintained accordingly. Due care will be taken while enumeration and harvesting of trees for slopes more than 40% and falling under buffer zones will be observed. No water bodies will be disturbed because there is no water body/rivulet found in Annual #5 for this logging season.

Euro Liberia Logging made use of remote sensing imagery of Landsat in studying the changes in vegetation cover over time. The methodology included different processing techniques for satellite images in order to create a time-series of images (2000-2008). Each of the satellite images in the data set was classified as well as digitized to delineate the forest boundaries and land use types. All the images showing the forest extension for the different dates studied was combined in a GIS environment to perform subsequent analysis as adopted from (*RBG, Kew, 2001*)

Changes in the performance and or state of forest cover was identified using fine and coarse resolution NDVI (Normalized Difference Vegetative Index) generated in ArcView 3.3 based on

time-series imagery from 2000 to 2008. This was also aided and verified by performing FCC (False Color Composite) on each image. The forest cover for each year was digitized and the trend and nature of change and or encroachment was analyzed to compliment imagery data which could not be classified due to poor resolution and haze.

DOCUMENT RECORD SHEET

Name and contact address of contract holder	EURO Liberia Logging Company. Congo Town, Old Road, Monrovia, Liberia 0888909999– Georges Akkari
Contract reference number	FMC #005
SFMP reference number	Fifth version #5
Contract effective date	September 22, 2009
Strategic Forest Management Plan date of approval	November 9, 2018
Five-Year Forest Management Plan reference number and date of approval	5-YFMP # 01
Annual Operational Plan reference number	AOP #005
Period covered by Annual Operation Plan	2022-2023
Date of AOP submission to FDA for approval	October 3, 2022
Signatory Authority: Georges Akkari	
Date of AOP approval by FDA	2022
Signatory Authority: Managing Director, Forestry Development Authority, Govt. of Liberia	

3.0 REFERENCES

3.1 Location of Annual Coupe #5 in Forest Management Contract Area “F”

- Order of Passage within the planning schedule:

The order of passage within the planning schedule of ELL’s Fifth AOP considers the evaluation of all applicable information regarding Forest Management Contract Area “F”; which includes planning of forest management activities that considered the economic, environmental and social values of the forest. These values have thus been refined as follows:

- ✓ Economic values - subdivided into Productivity and Quality
- ✓ Environmental values - no further subdivision; and
- ✓ Social values - subdivided into health & Safety

▪ Location within the Forest Management Contract Area-F

The Guidelines for Forest Management Planning in Liberia requires that forest resources areas must be delineated into three (5) management units known as compartments for ease of management. Besides, each of the compartments must also be delineated into Five (5) Annual Coupes as mandated by the Guidelines. As such, Forest Compartment one (1) has since been delineated in 2018 into Five Annual Coupes, and Annual Coupe Three has been surveyed and enumerated to be harvested during the 2022-2023 logging season. The Annual Coupe lies directly in Forest Compartment one (1) as indicated in Figure One below:

▪ Surface Area of Annual Coupe 5

Annual Coupe Five of Forest Compartment one (1) has a surface area of about 10,841 hectares, which is 20 % of the land area of Forest Compartment one (1). During the inventory and enumeration of the entire Annual Coupe # 5, landmass of Forest Management Contract Area “F”, Euro Liberia Logging, 7,275 hectares was set aside to account for primary forest, 693 hectares was also set aside as secondary degraded forest, both primary and secondary forests accounts for timber production zones. During the satellite imagery analysis, 2,871 hectares was identified as farmland, shifting cultivation and re-growth. During the entire analysis, there were no water courses & swamps identified. See Table 3 below:

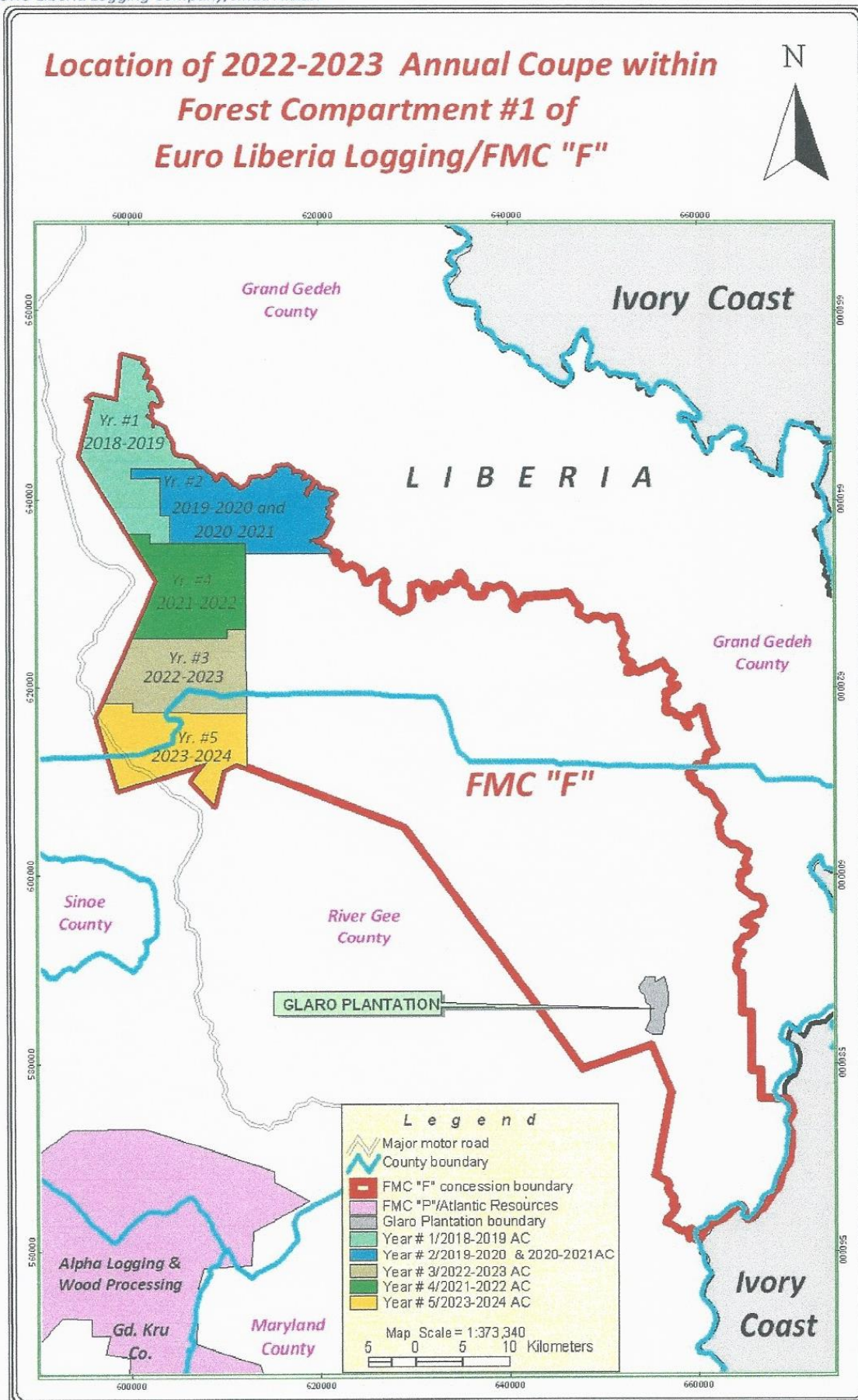


Figure #1: Location Map Showing Euro Liberia Logging 2022-2023 AC

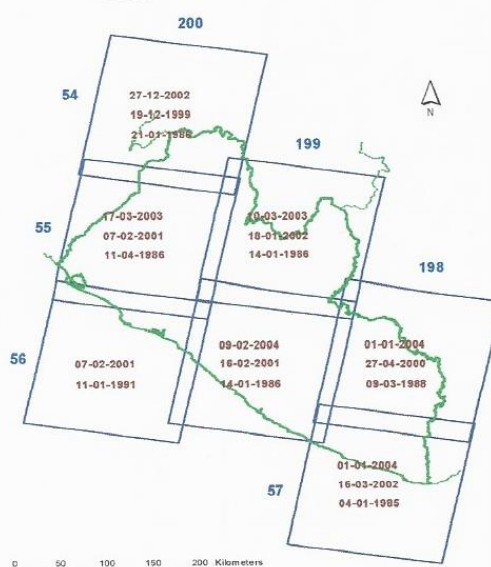
3.2 Description of the Annual Coupe 5 Boundaries

- Boundaries and Surface Area

Metes & Bounds/Description of the Annual Coupe Boundaries

The 2022-2023 Annual Coupe boundary line of EURO Liberia Logging Company commences at Block Corner Point # 285, UTM Zone 29 N (0600304 – 0625277), thence a line runs Due East for 9,965 meters to a point, thence a line runs Due North for 1,000 meters to a point; thence a line runs Due East for 2,000 meters to a point; thence a line runs Due South for 9,000 meters to a point; thence a line runs Due West for 12,000 meters to a point; thence a line runs Due North for 1,000 meters to a point; thence a line runs Due West for 2,954 meters to the point on the Western boundary of the Annual Coupe marked Waypoint # 11, UTM Zone 29 N (0597231 – 0618233); thence a line runs N 23° E for 7,632 meters to the point of COMMENCEMENT, embracing **10,841 hectares** of land and NO MORE.

6 0 0 3 04	6 1 0 2 67	Point	Surface	path	Length to be
6 2 5 2 77	6 2 5 2 63	description	area(ha)		demarcated
Point reference	Coordinates				
A	0600304-0625277	West of the AC	-	p56-r198	0 kilometer
B	0610267-0625263	East of the AC boundary	-	p56-r198	9 kilometers
C	0610266-0626265	North of the AC boundary	-	p56-r198	1 kilometer
D	0612277-0626261	East of the AC	-	p56-r198	2 kilometers
E	0612286-0617267	East of the AC	-	p56-r198	10 kilometers
F	0600240-0617289	South of the AC	-	p56-r198	12 kilometers
G	0600236-0618300	west of the AC	-	p56-r198	1 kilometer
H	0597231-0618233	West of the AC	-	p56-r198	3 kilometers



Criteria For Sectioning Forest Compartment#1 Into Annual Coupes

The delineation of all forest compartments into annual coupes is sanctioned by the Guidelines for Forest Management Planning in Liberia. It mandates that each annual coupe must be equal to 20% of the total harvestable area of a Forest Compartment; hence, Forest Compartment #1 of Forest Management Contract Area "F" has been delineated into Five Annual Coupes.

Liberia's Code of Forest Harvesting Practices and Manual for Standard Operating Procedure for Forestry Operators provide the methodology for conducting inventory or enumeration per block falling in the respective annual coupe. The details have been provided in:

- Preparation of blocks for enumeration – this includes line cutting at a distance of 50 m each dividing the blocks (1 sq km) in 400 cells of equal size (2500 sq m).
- The annual coupe area is divided into 1 km-square blocks to facilitate the work of the inventory crews; and
- 100% forest inventory of the blocks with markings, tagging with barcodes and recording of all the trees 50cm DBH and above.

Block maps, Site maps or sketches shall be prepared for all harvests and submitted with the plan application to the Compliance Department of ELL for analysis. The map will clearly indicate the site location, directions and all access points, landings, haul roads, water bodies, uncut buffer areas, and stream crossings on the block and sketch maps wherever applicable. A more detailed map of buffer areas is required when buffer management plans are submitted. The harvest areas would also be delineated and geographically coordinated and superimposed on the Topographic based map at a scale of 1:250,000

Table #2: Description Of Annual Coupe #5 Block Boundaries Coordinates

Waypoints	Latitudes	Longitudes
11	597231.32970	618233.40550
21	598228.51697	618305.01924
22	598224.47787	619290.78237
23	598220.34420	620299.73728
46	599216.15432	622307.08787
47	599220.46192	621307.68284
48	599224.81427	620297.73733
49	599229.16082	619289.03733
50	599233.41081	618302.96812
66	600240.11373	617289.78358
67	600236.17773	618300.92060
68	600232.33680	619287.29595
69	600228.41034	620295.73885
70	600224.47787	621305.62789
71	600220.58554	622305.05072
72	600216.75136	623290.03568
73	600212.86863	624286.99399

113	601223.64584	625276.49429
114	601226.89370	624285.31913
115	601230.16368	623288.23391
116	601233.39401	622302.99610
117	601236.67102	621303.55652
118	601239.98223	620293.72541
119	601243.28721	619285.54089
120	601246.52171	618298.85719
121	601249.83745	617287.88621
135	602233.29402	617286.03787
136	602232.20267	618296.84728
137	602231.13725	619283.82525
138	602230.04905	620291.75416
139	602228.95856	621301.52611
140	602227.87952	622300.97825
141	602226.81626	623286.46465
142	602225.73950	624283.67067
143	602224.96085	625275.05625
209	603244.30602	625273.58944
210	603243.50322	624281.98978
211	603242.69657	623284.65799
212	603241.89869	622298.92045
213	603241.08936	621299.45495
214	603240.27211	620289.74296
215	603239.45653	619282.07394
216	603238.65716	618294.79280
217	603237.83956	617284.15004
230	604247.76184	617282.25149
231	604247.13667	618292.73460
232	604246.52514	619280.32603
233	604245.90161	620287.74077
234	604245.27718	621297.39979
235	604244.65825	622296.88551
236	604244.04768	623282.87820
237	604243.43077	624280.33844
238	604242.81627	625272.15328
279	605240.67102	625270.71847
280	605241.10024	624278.69134
281	605241.53186	623281.10599
282	605241.95858	622294.86254
283	605242.39104	621295.35924
284	605242.82787	620285.75591
285	600304.74586	625277.81305

288	605243.26364	619278.59513
289	605243.69107	618290.70071
290	598573.59454	621309.00640
291	605244.12821	617280.37947
311	606256.58584	617278.47674
312	606258.38521	618288.62968
313	606260.14547	619276.82947
314	606261.93867	620283.72750
315	606263.73732	621293.26914
316	606265.51773	622292.78587
317	606267.27496	623279.28332
318	606269.05217	624276.99390
319	606270.81963	625269.23731
363	607245.64798	625267.83569
364	607247.05039	624275.37895
365	607248.46040	623277.53982
366	607249.85477	622290.78879
367	607251.26717	621291.24825
368	607252.69365	620281.75442
371	607254.11612	619275.10358
372	607255.51295	618286.59451
373	607256.94014	617276.59676
392	608265.29099	617274.70185
393	608264.78661	618284.53453
394	608264.29278	619273.34951
395	608263.79061	620279.74140
396	608263.28607	621289.17798
397	608262.78757	622288.73317
398	608262.29427	623275.73755
399	608261.79660	624273.70333
400	608261.30099	625266.37513
436	609260.64452	625264.93849
437	609261.00361	624272.05327
438	609261.36428	623273.96323
439	609261.72150	622286.70752
440	609262.08383	621287.13357
441	609262.44842	620277.75293
442	609262.81138	619271.61614
443	609263.17025	618282.49716
444	609263.53455	617272.82627
460	610274.35055	617270.92602
461	610273.48179	618280.43487
462	610272.59609	619269.93973

463	610271.76470	620275.74435
464	610270.89626	621285.06878
465	610270.03594	622284.66117
466	610269.18694	623272.17193
467	610268.32713	624270.39041
468	610267.47223	625263.49138
469	610266.60930	626265.14850
501	611273.72123	626263.27739
502	611274.73508	625262.04242
503	611275.74137	624268.72626
504	611276.75264	623270.38177
505	611277.75300	622282.61708
506	611278.76536	621283.00620
507	611279.78751	620273.73687
508	611280.80610	619268.11173
509	611281.80856	618278.37663
510	611282.83058	617269.03044
523	612286.96828	617267.14385
524	612285.95651	618276.32573
525	612284.96212	619266.36792
526	612283.95344	620271.73679
527	612282.93993	621280.95087
528	612281.93749	622280.57950
529	612280.94707	623268.59696
530	612279.94413	624267.06828
531	612278.94763	625260.59872
532	612277.94275	626261.41203
960	599438.56608	623291.41890

The above Geographic Coordinates system defines *two-dimensional coordinates based on the Earth's surface*. It has an angular unit of measure, prime meridian and datum (which contains the spheroid). As seen in the above Block Map, lines of longitude have X-coordinates between - 180 and + 180 degrees.

Liberia falls within geographic zone 29 degrees North, for the computation of this Annual Coupe, WGS 84, Universal Traverse Mercator (UTM) was used.

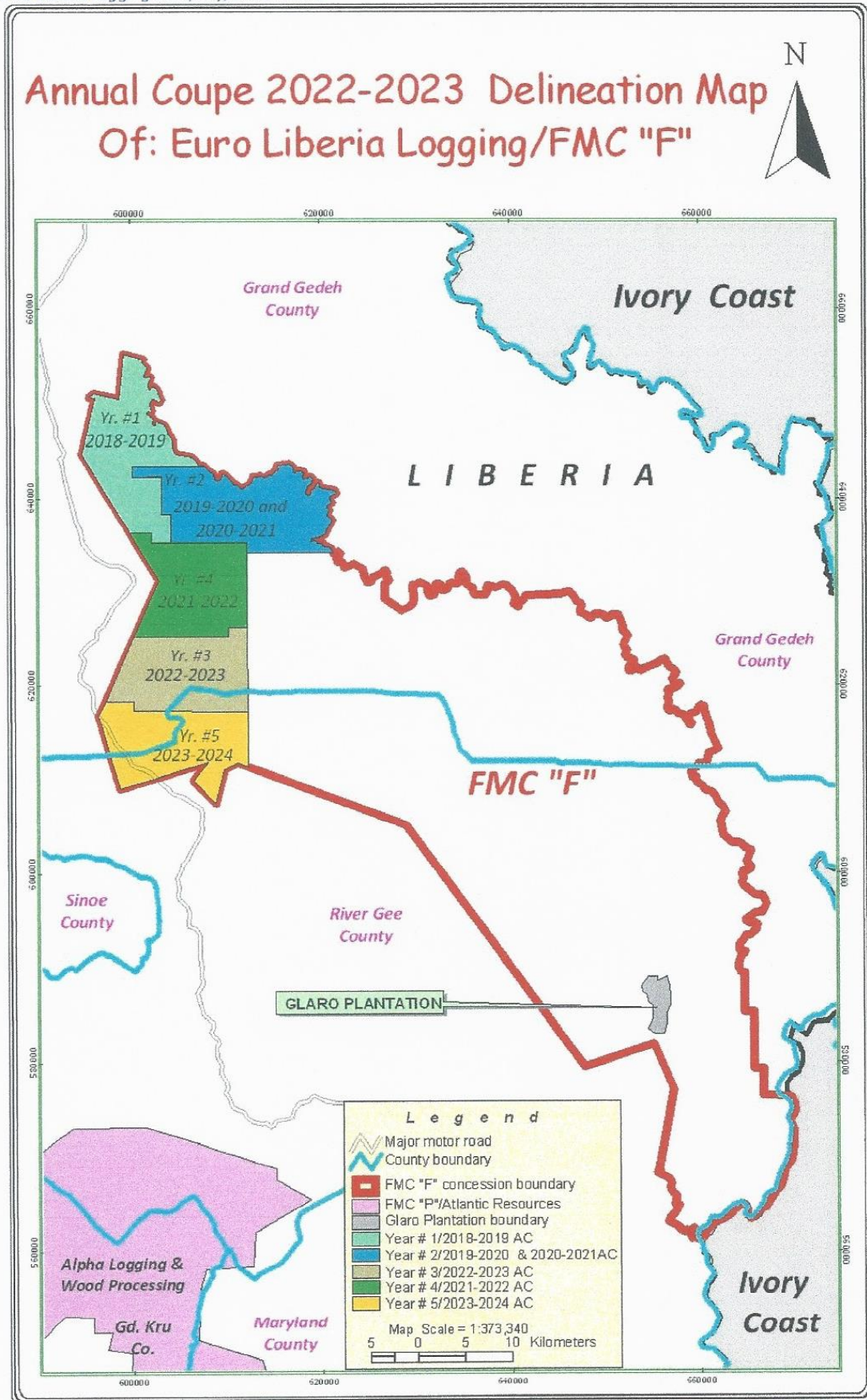


Figure #2: Annual Coupe Delineation Map

Specificities (Biophysical & Socio-economics)

Biophysical background of FMC “F” (Soil & Topology)

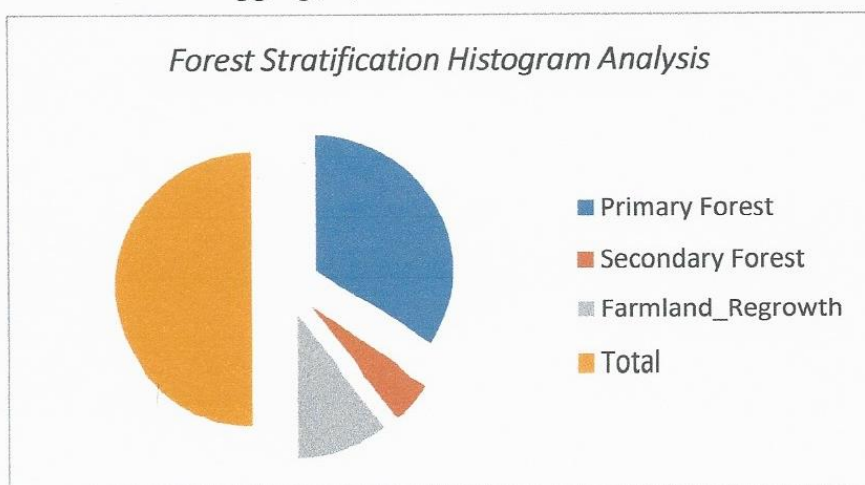
Soil is an important component of forest ecosystems as it helps to regulate important ecosystem processes such as nutrient uptake, decomposition, and water availability. Forest soils, which have generally been influenced by forest vegetation, are generally characterized by deeply rooted trees.

However, many of the important functions of soil are altered when environmental damages occur, and can dramatically affect the overall productivity of a forest. Soil disturbance caused by logging can impact both abiotic and biotic components of the soil, which in turn may impact nutrient cycling and other ecosystem function. Euro Liberia Logging Company has put in place mechanism that will ensure the conduct of all of its logging operations in sustainable and professional manners that conform to the requirements of the Revised Code of Forest Harvesting Practices of Liberia.

All unstable material (exposed soil) resulting from the construction of roads, trails and landings, with slopes greater than 30 percent and all perimeter slopes which are not adjacent to a buffer shall be stabilized after the operations are completed. Upon completion of the harvest, all roads, trails, and landings located on slopes greater than 10 percent shall be graded or back-dragged, seeded, and mulched according to specifications. The surface of roads, landings, and major skid trails less than 10 percent would be back dragged and left in a condition that permits successful natural regeneration of trees, shrubs, or other annual and perennial plants. Under certain circumstances stabilization of these roads and landings may be required. Landings shall be located on reasonable level (between 3 and 10 percent slope) well drained ground. If the harvest sites do not have any area with a slope of at least 3 percent, landings will be located on the maximum slope of the site. Landings located on slopes exceeding 10 percent shall require prior approval from the Compliance Department of ELL.

ii Forest Stratification of FMC “F”

Annual Coupe Three of Forest Compartment one (1) has a surface area of about 10,841 hectares, which is 20 % of the land area of Forest Compartment one (1). During the inventory and enumeration of the entire Annual Coupe # 5, landmass of Forest Management Contract Area “F”, Euro Liberia Logging, 7,275 hectares was set aside to account for primary forest, 695 hectares



was also set aside as secondary degraded forest, both primary and secondary forests accounts for timber production zones. During the satellite imagery analysis, 2,871 hectares was identified as farmland. During the entire analysis, there were no water courses & swamps identified.

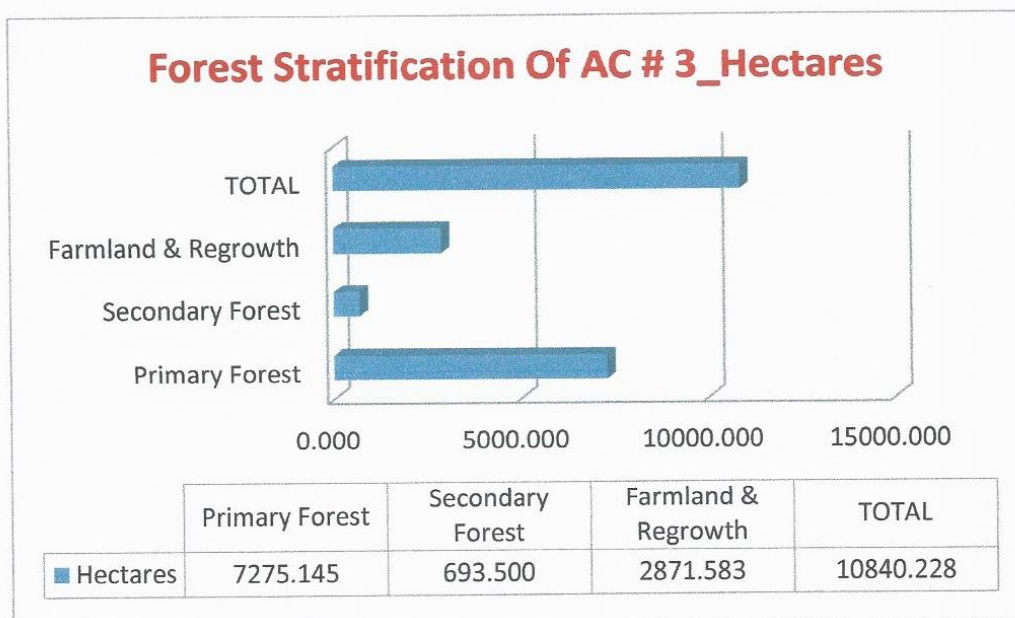


Image Enhancement During Forest Stratification:

Each Landsat image was first enhanced using linear Contrast stretching and secondly a 7×7 Edge enhancement (Normalize Kernel) convolution filters. Histogram equalization was also performed to improve the quality of the image.

Bands b2, b1, b3, (RGB), b2, b3, b1, (RGB), b4, b5, b3 (RGB) as well as b4, b3, b2 (RGB) were found to be most effective in discriminating each class and thus used for geo-referencing and classification. The above image enhancement was performed using ERDAS imagine 8.5.

Geometric Corrections During Forest Stratification:

The process and analysis of multi-temporal data can be done only when they are geo-referenced similarly or to each other. The Images had to be geo-referenced to each other with an accuracy of one pixel. Otherwise, the error coming from different coordinates for similar objects in the two images can be wrongly accepted as a land use change. That means, with an inaccurate geo-referencing, a pixel might refer to different objects in the two images and be considered as a land use or land cover change, which is not realistic. To prevent such a problem, in comparison of multi-temporal images the best solution was to geo-reference one of the images using an available map and then geo-referencing the other images according to the first one. However, in this report, the Landsat ETM+ Image of the year 2006 was already geo-referenced using the Universal Transverse Mercator (UTM) projection of WGS 1984 Zone 29 North. The TM imagery of 2006 and ETM Imagery of 2007 were geo-referenced in ERDAS IMAGINE 8.5 using the already geo-referenced ETM+ image.

The control points were selected using different color composites with band combinations of 213, 231 and 453

Map Analysis During Forest Stratification:

Three major map analyses were carried out on the GIS to accomplish the objectives of this Annual Operational Plan. These are;

- i. Assessments of the major encroachment and forest cover over the entire period where possible.
- ii. Assessments of the land use / land cover themes from 2006 to 2018.
- iii. Overlays for forest cover change detection for both digitized forest polygons and classified maps.

Table #3: Summary of Surface Area / Land use Type On Annual Coupe # 5

CLASSIFICATION	SURFACE AREA	PERCENTAGE IN AC
Primary Forest	7,275	67.10
Secondary Forest	693	6.39
Farmland & Regrowth	2,871	26.48
	10,841	99.97

The wildlife management (Fauna)

The Management of Euro Liberia Logging will do the best possible measures to mitigate affect in any alternative significantly, and none of the alternatives will be expected to have a measurable impact on mammals. Mortality risk due to increased trapping pressure might occur; this is under management's control and in case of adverse impacts, the same would be considered unacceptable in the future. Indirect effects of increased human development attributable to the forest sites may decrease the ability of the low elevation area to be used as a long-distance dispersal corridor. However, the corridor has not been compromised from existing human developments and the incremental decrease in effectiveness of the corridor attributable to the affected areas is negligible. Other mammals such as duiker's and chrevotain's habitat have not been affected because duikers are wide-ranging animals, the indirect impacts of increased disturbance and increased human development might have increased mortality. Mitigation proposed for mammals would likely be effective in reducing the impacts of disturbance and increased mortality risk, and alternatives with mitigation proposed for mammals would be the least impact action alternatives.

Comprehensive records on fauna is indicated below in this Annual Coupe, the sampling inventory result indicates some forms of animals observed (scat, prints, call or sighting) were recorded. (Below is summary of fauna observations were observed)

Species list identified by the team or community in the area

Name of fauna / species	Type of observation	Community observation
Red colobus monkey	Common	-
Parrots	Common	-
Hawk	Common	-
Horn bills	Common	-
Forest buffalo	Common	-
Water duiker	-	Rare
White antelope	-	Rare
Bats	Common	-
Squirrels	Common	-
Rattle (yellow snake)	Common	-
Cobra	Common	-
Turtle	Common	-
Porcupine	Common	-
Crocodile	Common	-
Elephant	Common	-

Socio-economic background:

Sustainable forest management is associated with socio-economic issues; which are some of the important considerations that every forest management regime must incorporate in its planning processes.

Euro Liberia Logging Company provides valuable goods and environmental services that are of importance to the inhabitants of the communities within and around the borders of the Forest; therefore, Euro Liberia Logging will continue to be involved with community issues and have uphold commitment to the provisions agreed on during the signing of the Third Party Social Agreement.

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 GPS; thus, the UTM Coordinates were taken and recorded. Therefore, the actual location of each affected community is known by the management of Euro Liberia Logging.

Table #4: Affected Communities In & Around Annual Coupe # 5

Towns	Male	Female	Latitudes	Longitudes
Headquarter (CVI)	426	229	611346.000000000000	623759.000000000000
Belleh Yallah	281	142	613077.000000000000	623137.000000000000
Panrow	623	448	596434.000000000000	626020.000000000000
Petroken	642	598	594939.828729999900	624013.519335999900
Gbeyelogbo	43	29	595011.000000000000	622540.000000000000
Farley	6	4	594947.000000000000	622030.000000000000
Dugbeh	9	3	594686.000000000000	621734.000000000000

Boley's	261	228	594059.000000000000	620350.000000000000
Pennoken	864	832	593885.000000000000	618950.000000000000
Petroken	445	359	595420.536926000000	623776.83842299900
	3600	2872		

Human Locations (Villages & Settlements)

As mentioned in the table above, there are ten (10) towns/villages in and around Annual Coupe # 3. The estimated population is **6,472**, 3,600 constitute the total population for men while 2,872 constitute the population for women. The towns and villages are included in the table above.

Infrastructure

Road maintenance

Road maintenance is an integral part of planning of logging activities. For the road maintenance below roads have been considered for repair and other associated works to be done in line with maintaining a proper transportation of logs from forests to log-yard and onward to export port. Roads to be maintained during this logging season are roads between John Davis Town in Grand Gedeh County and Barduah's Town in Sinoe County. There is an 85.2 kilometers roads between John Davis Town, Panrow, Petroken, Dugbeh's Town, Representative Boley's Village, Pennoken, Tweh's Village, Jarwodee, Keh's Town, Kotjaryee's Village # 1 and 2.

Bridges - Iron/ Timbo and Logging Bridge

The constructed bridges and the newly rehabilitated road by ELL (45km) stretching from Putu to Jarwodee joining the Zwedru G.Ville main road are to be maintained for effective transportation and work during the upcoming logging season. EURO Liberia Logging Company has to procure equipment such as dumping truck, skidder, excavator, tipper truck, motor grader etc. for maintaining bridges.

There is an additional 95.02 kilometers stretch of roads between Barduah's Town and Greenville Port. This particular segment of roads has many bridges that needed keen attention. There are many rivers, streamlets, creeks that pass from one side of the road to the other, which makes it very difficult to ply during the rainy season.

Accessibility of Roads

♥ Port Facilities

Forest Management Contract area "F" is 50 miles Latitudes (North) of the Atlantic Ocean and the Seaport is the Port of Harper.

♥ Primary Road Access

Forest Management Contract area "F" is 116 miles (185.6 kilometers) by road to the Port of Harper, Maryland County and 136 miles (217.6 kilometers) by road to the Port of Greenville, Sinoe County.

♥ Local Road Access

There is direct 332 miles or (531.2 kilometers) of primary motor road access to FMC area “F” from Monrovia to Gbarnga through Tappita and Zwedru, but few secondary/feeder motor roads from Putuken, Fish Town, and Jarpaken comes within approximately 11-15 miles from the Southern portion of FMC area “F”. These roads would require some improvement to bring it up to an adequate standard for log transport.

Numbers of roads have been built in the past by EURO Liberia Logging for the welfare of the community in relation to communication channel development and connecting people to outside world.

To date, EURO Liberia Logging has rehabilitated and connected the following towns and villages: Joabo, Thomas Village, Hoto Village, Jerlu’s Town, Gbeayoubu, Garliken, Karlorwien and Jue’s Village. Approximately 58 kilometers covered and Putu Jarwodee feeder road spanning 42 km connecting to Greenville Zwedru Highway.

Local Community Activities

Sacrifice demand by community

There has been raising demands by community with respect to maintaining their community rituals such as sacrifice demand, taboo days and other associated activities performed by community elders and CFDC members. The discussion is ongoing and will be completed based on the agreement between both the parties concerned.

Management meetings

ELL management agrees to conduct periodic meeting and update about the progress, process and any issues to be solved with joint intervention of parties. The meetings may be conducted based on availability of resources and necessity.

The people within the three (3) kilometres buffer radius of the Annual Coupe are mainly subsistence farmers; and shifting cultivation is their key method of farming. Five (5) priority crops produced by these communities include rice, cassava, okra, pepper and plantain, with few people involve with the production of tree crops, mainly oil palm. Several species of Non-Timber Forest Products (NTFPs) and other goods and environmental services are also provided by the Forest, but the five (5) priority ones produced by these communities include rattan, honey, bush meat, palm wine and monkey rope. These are harvested and either used locally for construction and handy crafting, food and medicine, or commercially on the local markets.

Management Units Within Annual Coupe # 5

The management units in Annual Coupe #5 contains three Forest Classes which is subdivided into two classifications: harvestable and non-harvestable.

Table #5: Percentage Of Management Unit In Annual Coupe # 5

CLASSIFICATION	SURFACE AREA	PERCENTAGE IN AC
Primary Forest	7,275	67.10
Secondary Forest	693	6.39
Farmland & Regrowth	2,871	26.48
	10,841	99.97

Forest Zone Map (2022-2023 Annual Coupe)

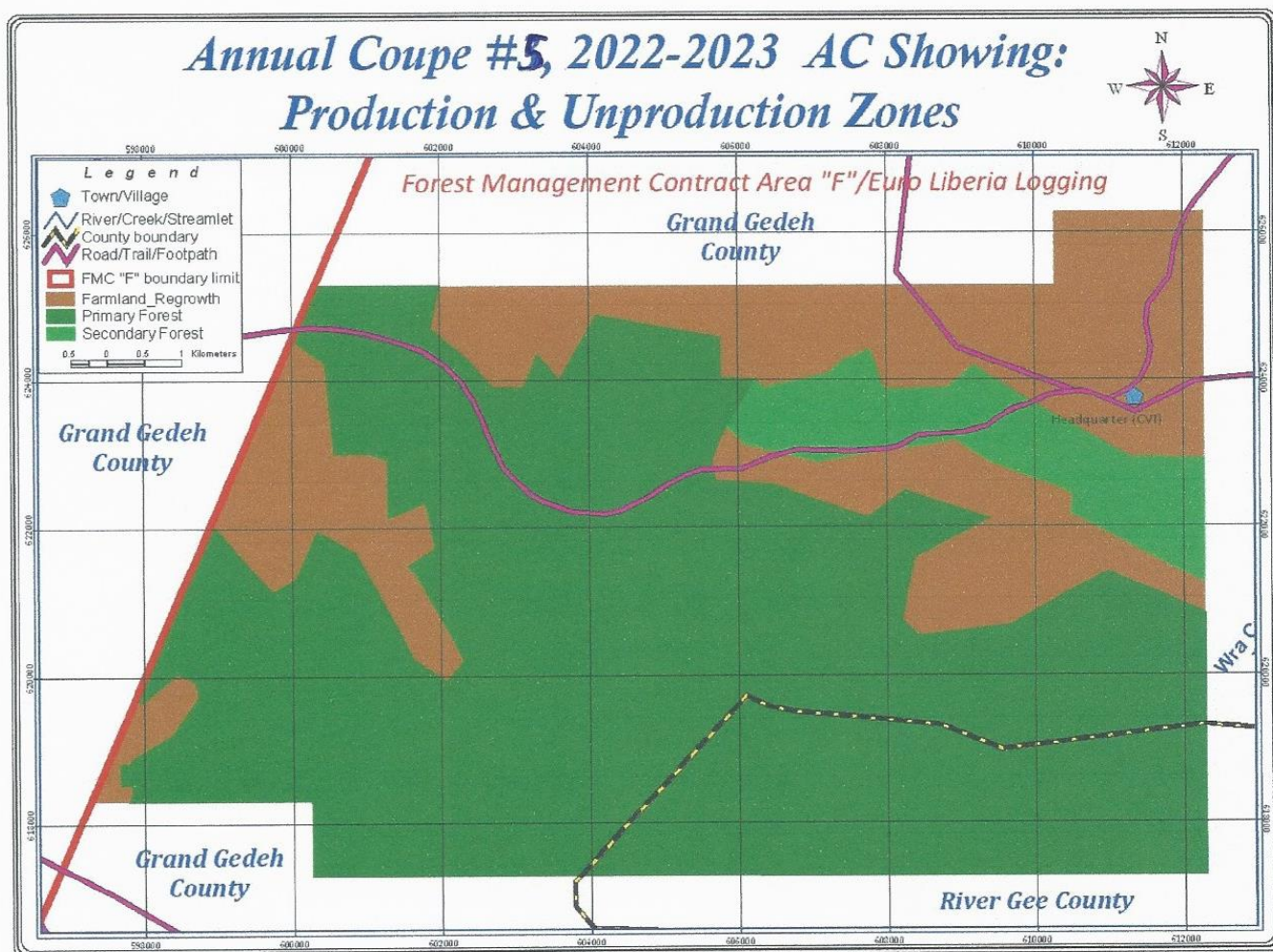


Figure 3: Timber Production Zone

Past Logging Activities

Euro Liberia Logging Company (ELL) operated in forty five (45) blocks located in Forest Compartment # 1, Annual Coupe #4, during the past logging season which was 2021-2022. The company didn't complete the felling and extraction in forty five (45) blocks out of the sixty seven (67) blocks. The company intends to bring all the forty five (45) approved blocks forward to 2022-2023 logging season to be worked in as Re-entry blocks.

The forty five (45) blocks to be used as Re-entry blocks are: AA-6, AA-7, AA-8, AA-9, BB-7, BB-8, BB-9, CC-7, CC-8, M-13, M-14, N-13, N-14, N-15, N-16, N-17, N-18, N-19, N-20, O-11, O-12, O-13, O-18, O-19, P-13, P-20, P-21, R-20, S-19, S-20, T-18, T-19, U-10, U-11, U-15, W-5, W-6, X-3, X-4, X-5, X-7, Y-4, Y-8, Z-5 and Z-6.

Additionally, during the 2021-2022 logging season, there were twenty two (22) blocks surveyed, enumerated, verified and approved by the Forestry Development Authority but were untouched due to few factors: the collapse of the timber markets around the World. The emergence of COVID-19 pandemic to Liberia which prevented Euro Liberia Logging Company from carrying out normal operations in the Forest Concession and this lead to the temporary closure of Euro Liberia Logging. Now that we have a semblance of stability within the industry and the little improvement of the market, Euro Liberia Logging wishes to bring forward those blocks that contain species in keeping with section 6 of the Guideline for Forest Management Planning on Opening Schedule, paragraph 4. Those untouched/brought forward blocks emanates from 2021-2022 Annual Coupe. Those blocks within the 2021-2022 Annual Coupe are: AA-4, AA-5, BB-6, CC-10, CC-11, CC-6, DD-10, DD-6, DD-7, DD-8, DD-9, V-10, V-11, V-9, W-10, W-4, W-8, W-9, X-2, X-9, Y-5, and Z-4. We wish to work in the above untouched blocks during the 2022-2023 logging season pending the approval of the Authority.

Annual Audit Report

Regarding an Annual Audit report of Forest Management Contract Area “F”, this has not been conducted. Thus there are many standing tree of merchantable size in the forest. After the 2022-2023 logging season, we will prepare and submit Annual Audit/Annual Compliance Report to the Forestry Development Authority and the Ministry of Finance for Development Planning as per law.

Pre-harvest Enumeration Results

Methodology

With reference to Chapter 2.2 of the Revised Code of Forest Harvesting Practices of Liberia, pre-harvest enumeration shall be completed in advance of cutting any trees at the start of each harvesting period, and such action must receive approval from the Forestry Development Authority (FDA). The Code also provides the methodology to be used to conduct inventory exercises in the annual coupe. The Code mandates that the conduct inventory exercises in the annual coupe shall be in conformity with the below standards:

- ❖ Inventory of all blocks for 100% stocking of trees above 60 cm dbh using regular Geographic Grid (North / South / East and West) in each kilometre square blocks to develop tree location map; and
- ❖ Inventory shall include the markings and tagging with barcodes and recording of all trees from 60cm DBH;

Criteria for the Selection of Harvestable Tree Species

Apart from the 100% inventory of the annual coupe blocks, the following criteria were used for the selection of harvestable tree species:

- ❖ Minimum required diameter cut limit (MDCL) is of 60cm;
- ❖ Location of trees is considered, especially those located in protected areas or in buffer/exclusion zones or on deep slope; and

- ❖ Harvesting limit per block will be 30m³/ha on each block.

Results of Pre-harvest Enumeration (number of trees/ species/ diameter class)

Result of the Annual Coupe Inventory

Euro Liberia Logging Company has conducted inventory of Annual Coupe # 5 and will submit an excerpt of the results for some of the blocks it has enumerated for the 2022/2023 logging season; a full report of the total blocks will be declare in LiberTrace System by way of the creation of the Forest Resource Area. Below of the excerpt of the few blocks:

Table 5: Excerpt of Pre-harvest enumeration Results: Number of Trees

Excerpt of pre-harvest enumeration results are found on pages 33-34.

Respect of the Annual Coupe Delineation Rules

In keeping with the Guideline for Forest Management Planning, Annual Coupe Delineation Rules does not apply to this annual coupe, because we are still working in Forest Compartment One (FC#1).

Planning Of Works

PPE:

All the employees (Field staffs) shall be provided with adequate PPEs in line with minimum requirements as per ILO and similar standards. The same could be decided jointly by management and ministry of labor upon the frequency and items to be provided.

Planning of logging activities

Annual Coupe # (5) Three and the squared kilometer blocks have been successfully delineated along with 100% stocking of trees above 60 cm DBH using regular Geographic Grid (North / South / East and West), and location maps of trees have subsequently been developed. Annual Coupe Three blocks includes: DD-11, DD-12, EE-1, EE-2, EE-3, EE-4, EE-5, EE-6, EE-7, EE-8, EE-9, EE-10, EE-11, EE-12, FF-1, FF-2, FF-3, FF-4, FF-5, FF-6, FF-7, FF-8, FF-9, FF-10, FF-11, FF-12, FF-13, GG-1, GG-2, GG-3, GG-4, GG-5, GG-6, GG-7, GG-8, GG-9, GG-10, GG-11, GG-12, GG-13, HH-1, HH-2, HH-3, HH-4, HH-5, HH-6, HH-7, HH-8, HH-9, HH-10, HH-11, HH-12, HH-13, HH-14, II-1, II-2, II-3, II-4, II-5, II-6, II-7, II-8, II-9, II-10, II-11, II-12, II-13, II-14, JJ-0, JJ-1, JJ-2, JJ-3, JJ-4, JJ-5, JJ-6, JJ-7, JJ-8, JJ-9, JJ-10, JJ-11, JJ-12, JJ-13, JJ-14, KK-1, KK-2, KK-3, KK-4, KK-5, KK-6, KK-7, KK-8, KK-9, KK-10, KK-11, KK-12, KK-13, KK-14, KK-15, LL-4, LL-5, LL-6, LL-7, LL-8, LL-9, LL-10, LL-11, LL-12, LL-13, LL-14 and LL-15.

Planning of the Road Net Work, skid trails and Landings Within AC #5

A well-managed transportation system provides access for timber removal and other forest management activities. Euro Liberia Logging Company has in place efficient and effective access to Annual Coupe # 5 and this system will be maintained and improved during the season. The overall goal for new road construction within the Annual Coupe #5 and road maintenance will be to protect or improve water quality. The planned activities within this 2022-2023 AOP will help meet transportation objectives. Existing road networks within the Forest Concession will be improved for the purpose of hauling logs.

Landings are open areas used for processing and stacking logs before they are loaded onto a log truck. It is often referred to by some as the front room of most timber harvests where machinery is stored and many field decisions are made. With little vegetation and a lot of vehicular traffic, landings can be prone to erosion. But such erosion can be controlled effectively without interfering with the function of the site. All of our landings will be created in ways that will not allow the flow of water directly into a stream or other water bodies. Apart from this, we will construct landings to prevent mud from being carried onto adjacent roadways. Landings will also be located on firm, well-drained soil, as far from water as possible and the number of landings will be minimized. All of these activities will adhere to the provisions of the Revised Code of Forest Harvesting Practices of Liberia.

Procedures for Planning and Monitoring of the Logging Operations

Skid trails are pathways used to transport logs from their areas of harvest to the landing. Skid trails are usually for temporary use. However, if they are not constructed or used correctly, they can have long-lasting impacts on water quality and soil conditions. When constructing skid trails in our contract area, we will:

- Minimize the number and area to be covered by skid trails to reduce environmental impacts;
- Locate landings before locating skid trails;
- Avoid locating skid trails in areas excluded from harvesting and where possible promote uphill skidding or on flat ground in areas of good soil drainage;
- Minimize disturbance to the soil such that surface runoff does not result in sediment transport into water bodies;
- Avoid widespread or random skidding patterns with repeated passes;
- Create skid trails only as wide as necessary to safely operate our equipment and conduct our harvesting operations.

Also, trees meant for harvesting are marked; and felling will be done in line with the provisions of the Revised Code of Forest Harvesting Practices in Liberia; therefore, as logging operations commence, a team of forest technicians will keep monitoring the process to ensure that only the trees marked for felling are felled, and felling takes place in approved blocks and within the contract area.

Harvest Monitoring and post-harvest Diagnosis

- **Post-harvest Diagnosis and Field Controls**

Commercial Logging has great impact on the soil environment, which may lead to erosion of the surface and the drainage structures. Henceforth, in order to balance the need for access into the forest, while minimizing environmental impacts, Euro Liberia Logging will adhere to its Environmental Management Plan (EMP) as we conduct logging operations. We will also ensure proper forest road network, which allows adequate access and minimizes impacts to the environment on the Community Forest.

Post-harvest Activities

■ Management of KM-Square Block Closure

Blocks shall be closed upon the completion of harvesting of the approved yields. In each 5-year compartment however, a re-entry will be requested from time to time for blocks not completely felled. In this case, Euro Liberia Logging has brought forward blocks to be worked in during the 2022-2023 logging season.

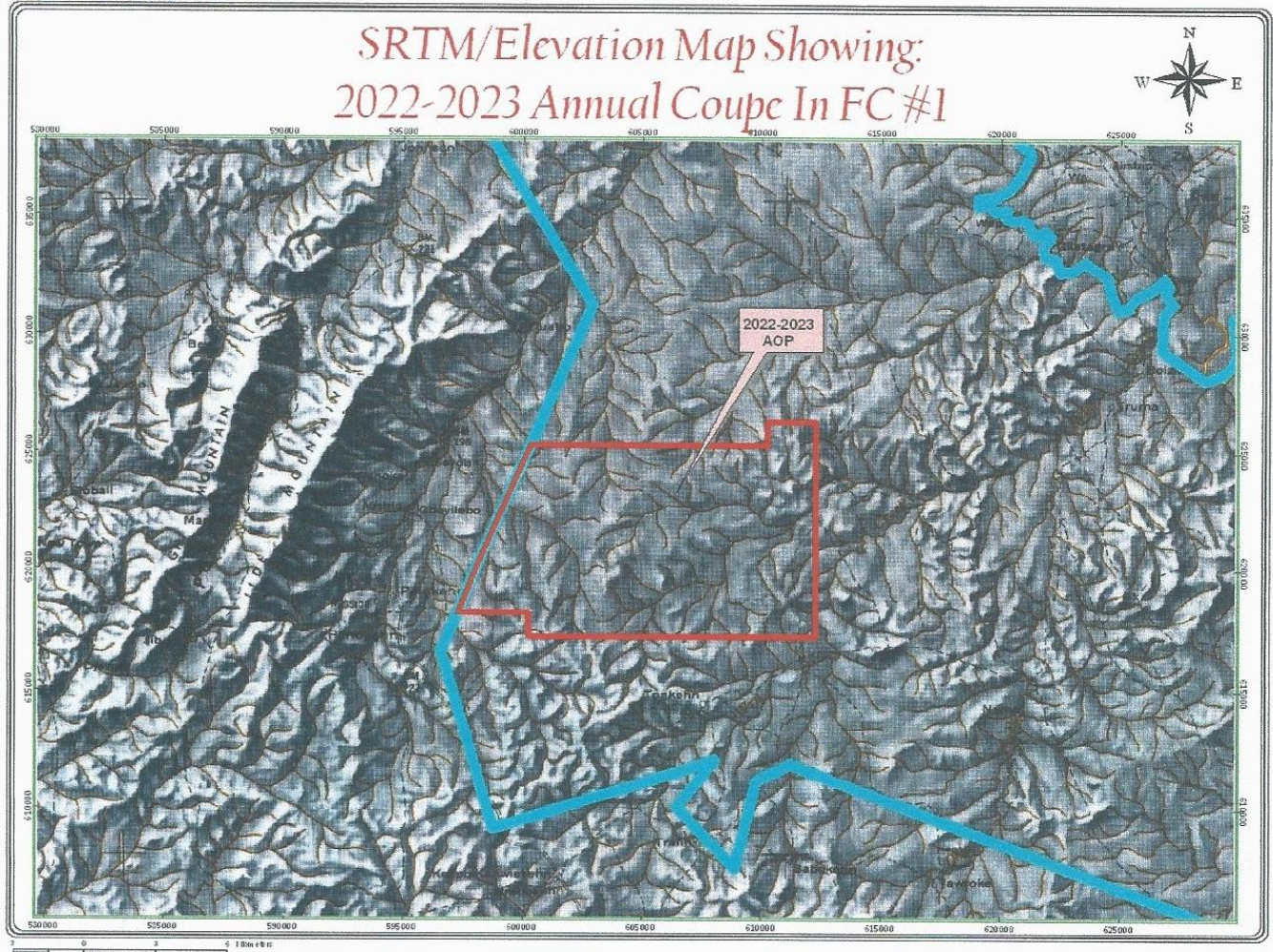
■ Road Maintenance and Closure

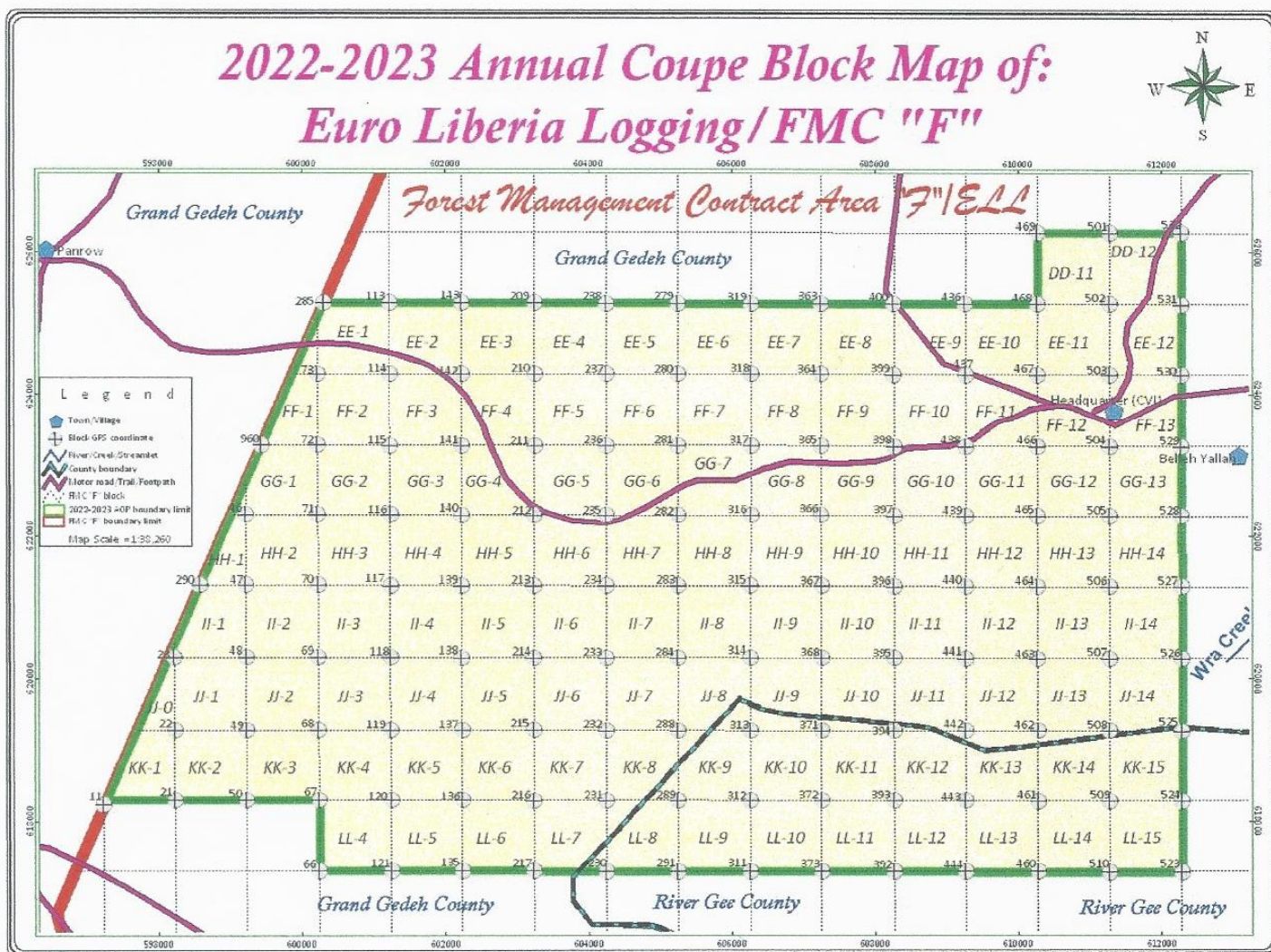
We have resolved to maintain forest road network in our concession; all side drains, turnout drains and culverts that will not be removed shall be left in good working condition. Similarly, roads that are not to be used until the next rotation shall be closed. For roads that are intended to be decommissioned, log culverts and temporary bridges shall be removed to allow unobstructed water flow.

■ Measures to Mitigate Negative Impacts

Though we may not have the sophistication but all natural impacts shall be mitigated once they are encountered during our operations.

EURO Liberia Logging Company/Jihad Akkari





**Figure 4: Annual Coupe Block Map of Euro Liberia Logging
Planning of other Activities**

Silvicultural Activities

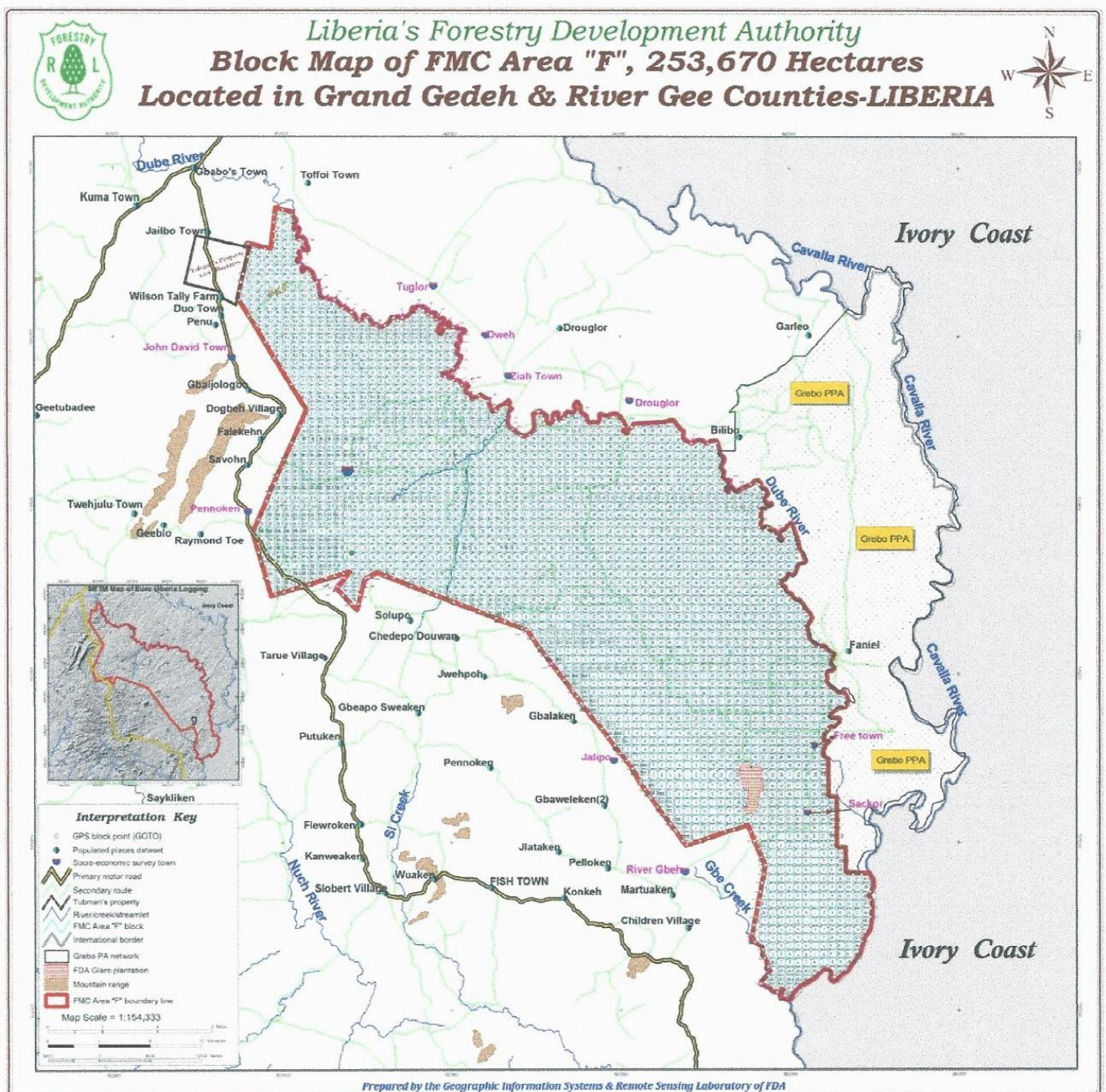
Silviculture treatment and reforestation activities of any nature are not required Forest Management Contract Area "F". The Forest will recover itself after harvest through a process of natural regeneration. Besides, all timber harvesting activities outlined in this Annual Operational Plan will be guided by the requirements of the Revised Code of Forest Harvesting Practices.

■ Social Program

To ensure that our plans and policies of our social programs are well pronounced to forest dwellers in our contract area, the Management of Euro Liberia Logging will continue to seek consultation with the affected communities through the Community Forest Management Body. We will also ensure that our social programs are fully implemented to enhance the living condition of the people.

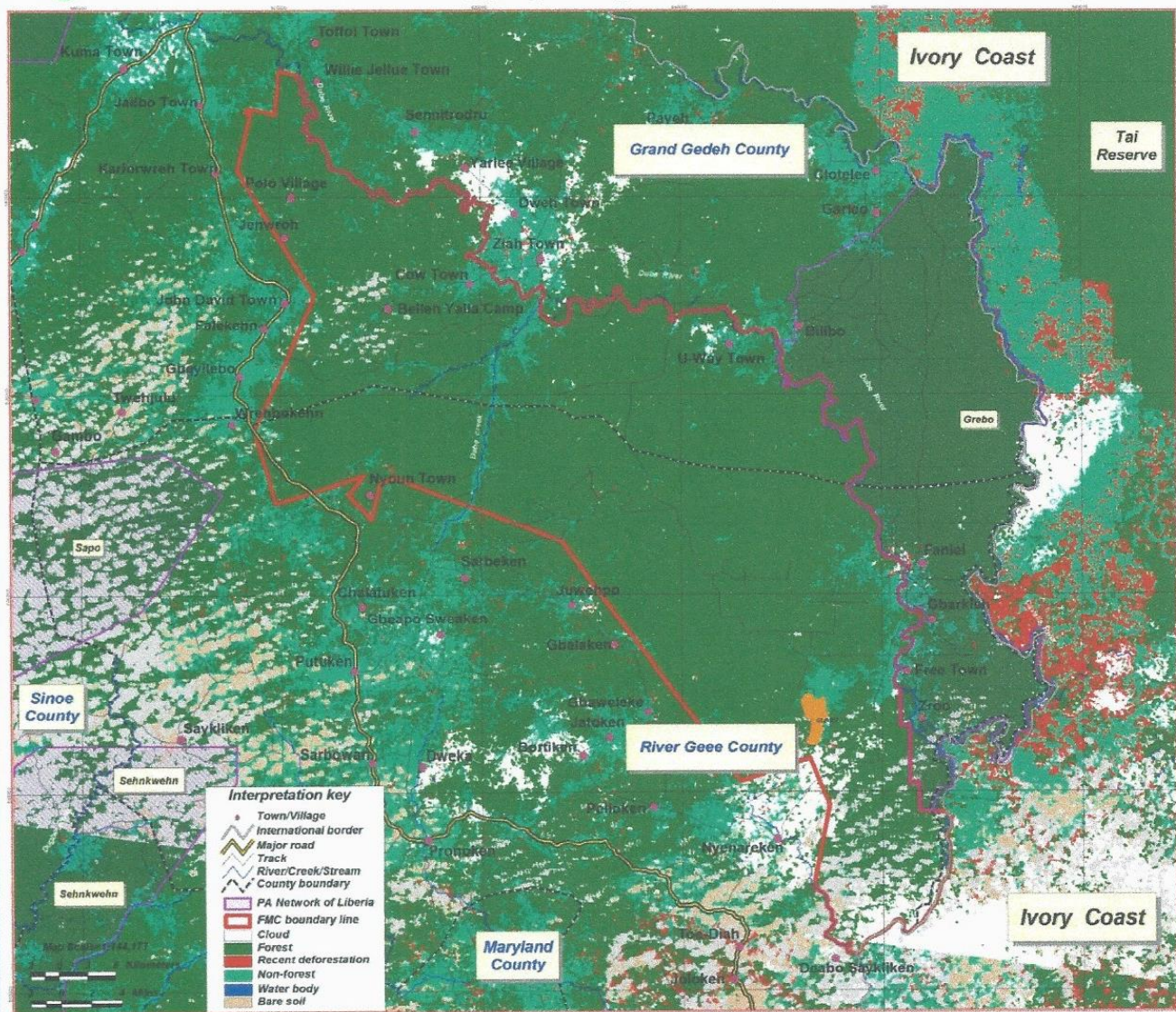
■ Environmental Program

The entire Forest Concession of Euro Liberia Logging has multiplicity of aquatic environments, to include streams, wetlands and water bodies bordering the Dube River in the East. These aquatic environments are critical to the health of the forest ecosystems. They serve as important habitat for many species and the source of fresh water for all species in the forest. The water quality of these aquatic environments impacts ecosystems beyond the boundaries of the Forest Concession. As one of our management objectives aquatic habitats will be protected in order to maintain the overall health of the Forest ecosystem. In keeping with the Revised Code of forest Harvesting Practice of Liberia, Euro Liberia Logging has demarcated 60% of forest land which encompasses for slopes, and forest. As protection and conservation zones, there were none found in this 2022-2023 Annual Coupe. We have also put in place mitigation measures to address any would be negative impacts that spill over from our harvesting operations. In the same vein, debris from our operations from will be contained in a pit far from water source and will be prepared in a way that there will be no contamination to underground water. Furthermore, Euro Liberia Logging Company has created corridors in blocks where felling is to commence to enable faunas migrate from the blocks before felling; some critical fauna's habitat will be annexed as a no-go zone for felling especially areas in the East of Annual Coupe #5.





Liberia's Forestry Development Authority
2007 Land Satellite Image Showing:
Euro Liberia Logging Company (253,670 Hectares)



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

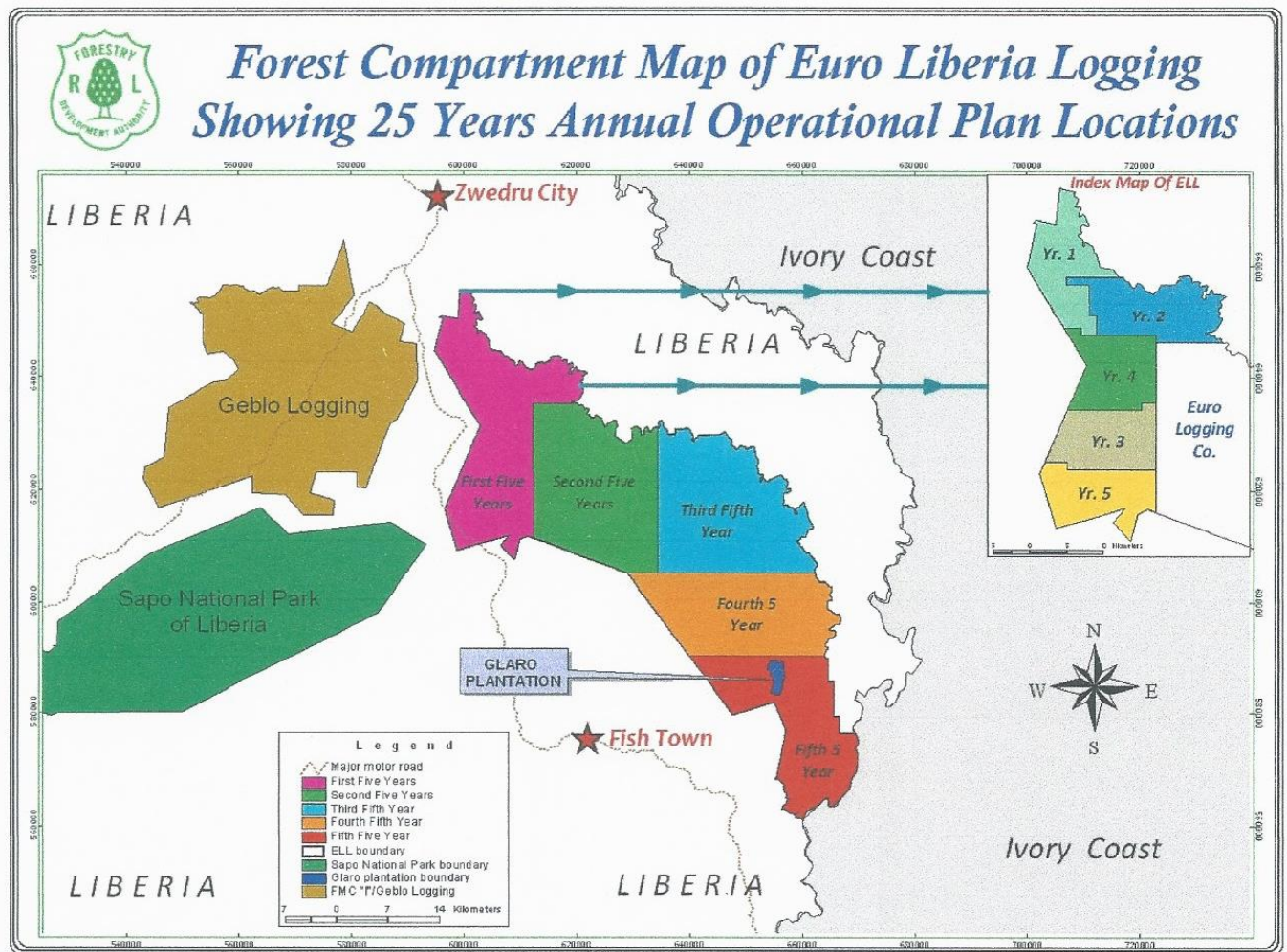
Figure 5: Forest Classification and Forest Zone Maps

Activity Planning/ Implementation Chart

The planned activities that are to be implemented during the implementation of this AOP are presented in Table Seven below:

Table 6: Activity Planning/Implementation Chart

ACTIVITY	SCHEDULE OF IMPLEMENTATION											
	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Pre-harvest Enumeration												
Annual Operation Plan Submission												
Secondary road Rehabilitation												
Harvesting												
Post-harvest Operation												
Planning of other activities												
Consultation												
Environmental Program												



Conclusion

This 5th Annual Operational Plan (AOP) is in compliance with one of the requirements for timber harvesting in our contract area, highlighting all of the major activities that need carried out during the **2022-2023** logging season.

Production of timber products will commence during this season upon receipt of the Annual Harvesting Certificate and the Approval of all the regular squared blocks. This will sustain investment and maximize profit through processing of Class "C" species and thereby optimize production and increase employment for our people.

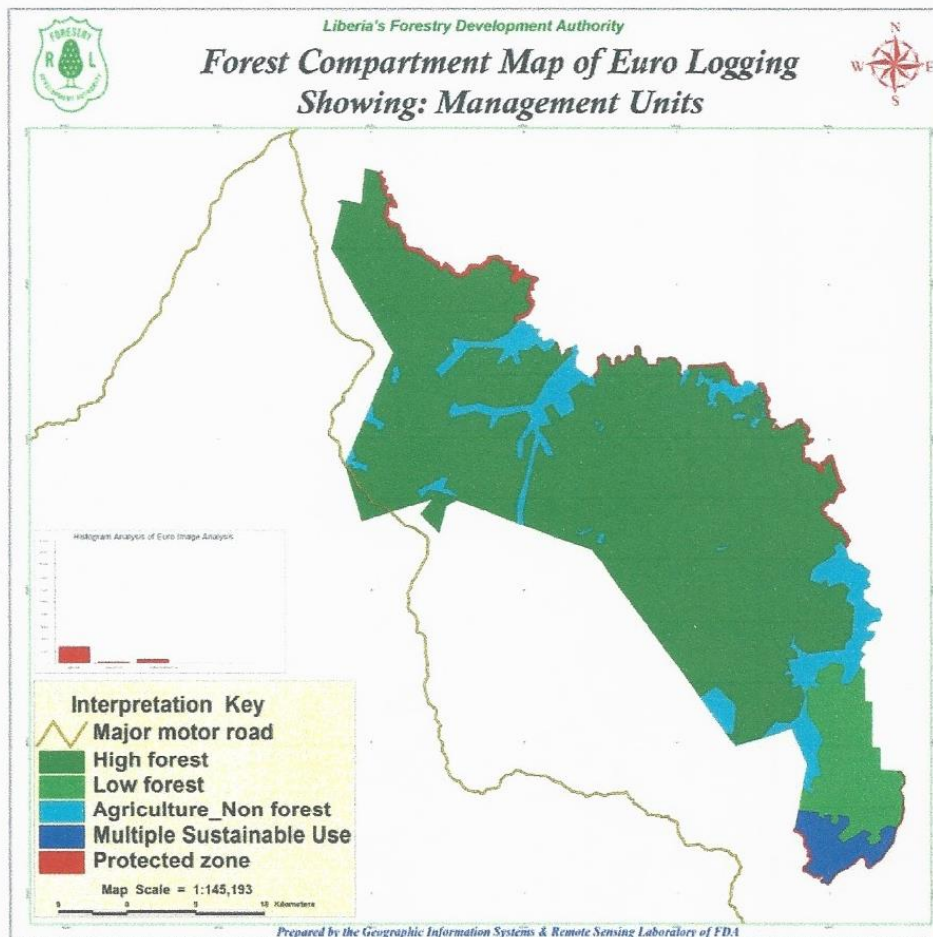


Table 7: Below Excerpt of Pre-harvest enumeration Results: Number of Trees



Euro Liberia Logging Co.

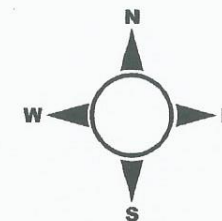
Zwedru Office
Grand Gedeh County

16 BLOCKS ENUMERATED 2022

Species	Species Code/DBH	Selected Species For Marketing							MACH 10, 2022								
		AA-6	AA-7	AA-8	AA-9	BB-7	BB-8	BB-9	CC-7	CC-8	U-10	U-11	X-3	X-4	Y-4		
Afzelia	AFZ (75+)	0	3	0	4	1	0	1	3	1	5	5	5	6	8		
Iroko	CHL (75+)	1	0	0	1	0	0	0	0	0	0	0	0	0	0		
Dedilolia	DID	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	
Movingui	DIS (75+)	0	0	1	3	2	0	0	0	1	0	0	0	0	0	0	
Tiama	ENTA (75+)	2	5	0	2	5	2	3	5	4	0	1	2	2	1		
Kosipo	ENTC - (75+)	0	0	2	4	1	4	6	0	2	0	0	0	0	0	0	
Sapele	ENTCY - (75+)	1	3	1	0	0	2	1	2	1	0	0	1	1	0	0	
Sipo	ENTU- (75+)	0	6	4	4	5	4	4	4	4	1	0	2	2	6		
Tali	ERY - (75+)	35	33	16	30	34	14	40	22	15	38	40	28	14	11		
Limbai	GIL - (75+)	12	0	3	0	1	0	6	5	18	0	3	2	0	2		
Bosse	GUA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Abura	HAL - (75+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Khaya	KHI	1	0	0	0	0	0	0	0	2	1	1	2	1	1		
Ekki	LOP- (75+)	59	120	83	30	58	95	83	42	100	87	73	51	52	123		
Lovoa	LOV- (75+)	3	9	2	0	0	6	2	1	6	8	6	0	1	7		
Manikara	MANI - (65+)	4	1	0	0	0	0	2	2	1	1	1	6	2	2		
Kusia	NAU - (75+)	3	10	3	1	5	4	4	8	10	8	8	3	3	2		
Danta	NES - (75+)	0	1	0	2	1	1	0	0	0	1	0	0	2	2		
Dihoma	PIP - (75+)	44	92	70	56	68	75	53	45	37	38	29	36	61	41		
Ilomba	PYC - (75+)	29	42	25	59	34	50	32	0	16	20	12	35	18	20		
Niangon	TAR - (65+)	77	12	13	25	15	17	30	33	55	24	28	30	22	10		
Framire	TEI (75+)	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0	
Frake	TES (75+)	2	10	11	0	5	3	3	4	1	5	1	0	10	2		
Tetra	TET (65+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Makore	TIE (75+)	0	4	0	0	1	2	0	2	1	5	3	1	2	1		

ANNUAL REPORT 2022

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2022-2023 Annual Coupe Map of Euro Liberia Logging/FMC"F"

Legend

- Primary Road
- Secondary Road
- Water Body
- Blockline
- 2018-2019
- 2020-2021
- 2022-2023
- 2021-2022
- 2023-2024
- FMC-F Boundary
- Forest Cover**
- Non forest
- Forest > 80% cover
- Forest 30% - 80% cover
- Soil Protection

Wra Creek

AC-2023-2024

1 0 1 2 3 m

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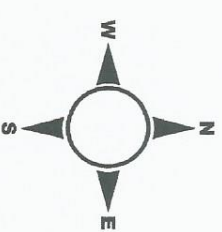
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AC-2021-2022

AC-2022-2023

AC-2023-2024

Wra Creek



Land Cover Including Forest Map of Annual Coupe-2022-2023

Legend

- Primary Road
- Secondary Road
- Water Body
- 2018-2019
- 2020-2021
- 2022-2023
- 2021-2022
- 2023-2024
- FMC-F Boundary
- Forest Cover
 - Non forest
 - Forest > 80% cover
 - Forest 30% - 80% cover

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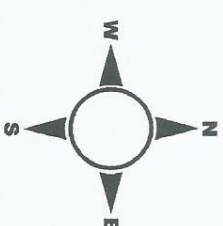
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AG-2021-2022

AC-2022-2023

AC-2023-2024

Wra Creek



Conservation, Protection and Timber Production Zones Map of Annual Coupe-2022-2023

Legend

- Primary Road
- Secondary Road
- Water Body
- 2018-2019
- 2020-2021
- 2022-2023
- 2021-2022
- 2023-2024
- FMC-F Boundary
- Forest Cover
 - Non forest
 - Forest > 80% cover
 - Forest 30% - 80% cover
 - Soil Protection

1 0 1 2 3 m

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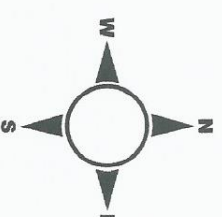
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AC-2021-2022

AC-2022-2023

AC-2023-2024

Wra Creek



Annual Coupe 2022-2023 Euro Logging/FMC-F

Legend

- Primary Road
- Secondary Road
- Water Body
- 2018-2019
- 2020-2021
- 2022-2023
- 2021-2022
- 2023-2024
- FMC-F Boundary

1 0 1 2 3 m

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