

ANNUAL OPERATIONS PLAN (AOP)

ZUZOHN COMMUNITY FOREST, ZUZOHN DISTRICT, GRAND BASSA COUNTY, LIBERIA



PRESENTED TO:

THE MANAGEMENT

FORESTRY DEVELOPMENT AUTHORITY (FDA)

WHEIN TOWN, MOUNT BARCLAY MONROVIA, LIBERIA

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Acronyms

FDA	Forestry Development Authority
BGLI	Booming Green Liberia Incorporated
AOP	Annual Operational Plan
CFMA	Community Forest Management Agreement
CFMB	Community Forestry Management Body
MDCL	Minimum Diameter Cut Limit
GOL	Government of Liberia
ESIA	Environmental and Social Impact Assessment
EPA	Environmental Protection Agency
SOP	Standard Operating Procedures
SFMP	Strategic Forest Management Plan
5Y-FMP	Five-Year Forest Management Plan
SA	Social Agreement
ZCF	Zuzohn Community Forest

1.0 EXECUTIVE SUMMARY

In fulfillment of one of the pre-felling requirements in line with the Liberian Code of Forest Harvesting Practices, the Forest Management Guideline of Liberia, and the Chain of custody Procedure # 7, the Management of BOOMING GREEN LIBERIA INC. has developed this first Annual Operational Plan (AOP) to operate the Zuzohn Community Forest in Grand Bassa County. The conditions set forth in the Code were taken into consideration while conducting the field studies/works.

It is also interesting to note that the template as provided by the Guidelines on Forest Management Planning in Liberia was also used in the development of this AOP. All of these are designed to successfully implement the principles of sustainable forest management in Liberia. It is known that sustainable forest management recognizes the importance of all products and services provided by the forest, including timber, water quality, soils, biodiversity, and the livelihood of people that live or work in the forest.

This plan details the methods and conditions of operation in the first annual coupe of compartment 1, for the Zuzohn Community Forest in Grand Bassa County. The document describes activities planned to be undertaken during 2018/2019 logging season and covers the normal methods of work, environmental, logistical and commercial considerations.

The total surface area of annual coupe 1 is 840 ha with non-operational area of 32 ha while the net harvestable area is 768 ha. A total of 9 blocks will be enumerated for the 2018/2019 annual coupe and these blocks are: DE, DD, BD, BE, EB, CF, DC, CE & CD.

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

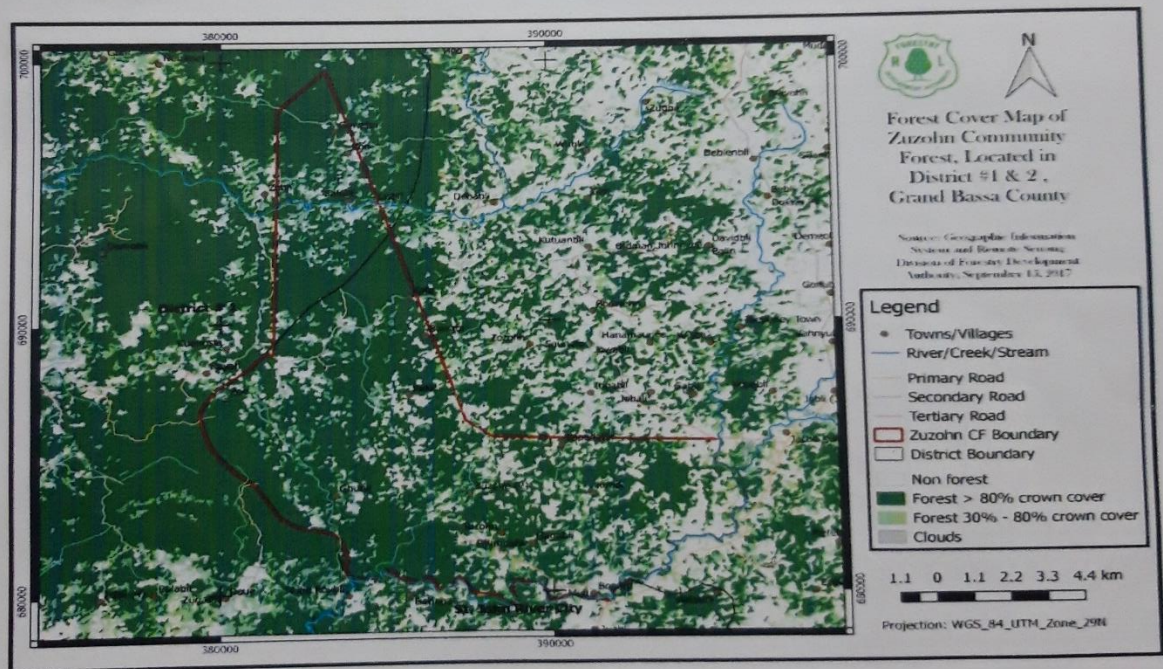
As a working document that has been prepared, understood, agreed to and to be used by forest technicians involved in forest operations in the Zuzohn Community Forest, BOOMING GREEN LIBERIA INC. will adhere to every aspect of the Code of Forest Harvesting Practices to enhance sustainability during 2018/2019 logging operations.

In fact, BOOMING GREEN LIBERIA INC. has developed its First Five-Year Forest Management Plan which shows the partition of annual coupes in the first forest compartment and operational activities in the contract area. There are also the descriptions of landing and skid trails, Compartment map, annual coupe & annual coupe location maps, road network map, block map, 3km buffer zone map of affected communities etc. This annual coupe is subject to update where necessary; however, we are under obligation to provide updated information and data for every Annual Operation Plan. Therefore, BOOMING GREEN LIBERIA INC. Management will develop the next AoP before the 2020/2021 logging season.

TABLE A: DOCUMENT RECORD SHEET

Description	Information
Name & Contact Address of Contract Holder	Booming Green Liberia Inc., Coconut Plantation, Mamba Point, Monrovia, Liberia
Contract Reference Number	
Contract Effective Date	
Annual Operations Plan Reference Number	AoP #01
Date of Submission to FDA for Approval	
Date of approval by FDA	Dec 7, 2018
Signature	<i>[Signature]</i>

Map 1: Zuzohn Community Forest Vegetation



2.0 REFERENCES

Contact Persons:

1. Name: Jerry Wang
Position: Managing Director
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3.0 LOCATION OF THE ANNUAL COUPE IN THE COMPARTMENT

BOOMING GREEN LIBERIA INC. first Annual Coupe is situated entirely within Compartment#1 of the three Compartments demarcated within the Zuzohn Community Forest Area. This annual coupe covers a total of 800 ha of forest land. However, the area consists of several settlements, degraded forest land and water courses; hence exclusion zone of 4% (32 ha) was extracted thus making the net harvestable area to be 768 hectares.

Map 2: showing location of Annual Coupe within Compartment 1



3.1 Description of the Annual Coupe Boundary:

This Annual Coupe is found in compartment 1 of the Zuzohn Community Forest located in River Cess County. The Annual Coupe contains a net harvestable surface area of 768 ha. Over the years, communities living within and around this AC have engaged in a number of livelihood activities which have impacted the tree stock within the AC. These include the extraction of NTFP, hunting and shifting cultivation. It's our hope that the commencement of logging operations will cause the communities to stop these activities within this AC and the Community forest as a whole.

Map 3: Boundaries and Surface Areas of Annual Coupe One

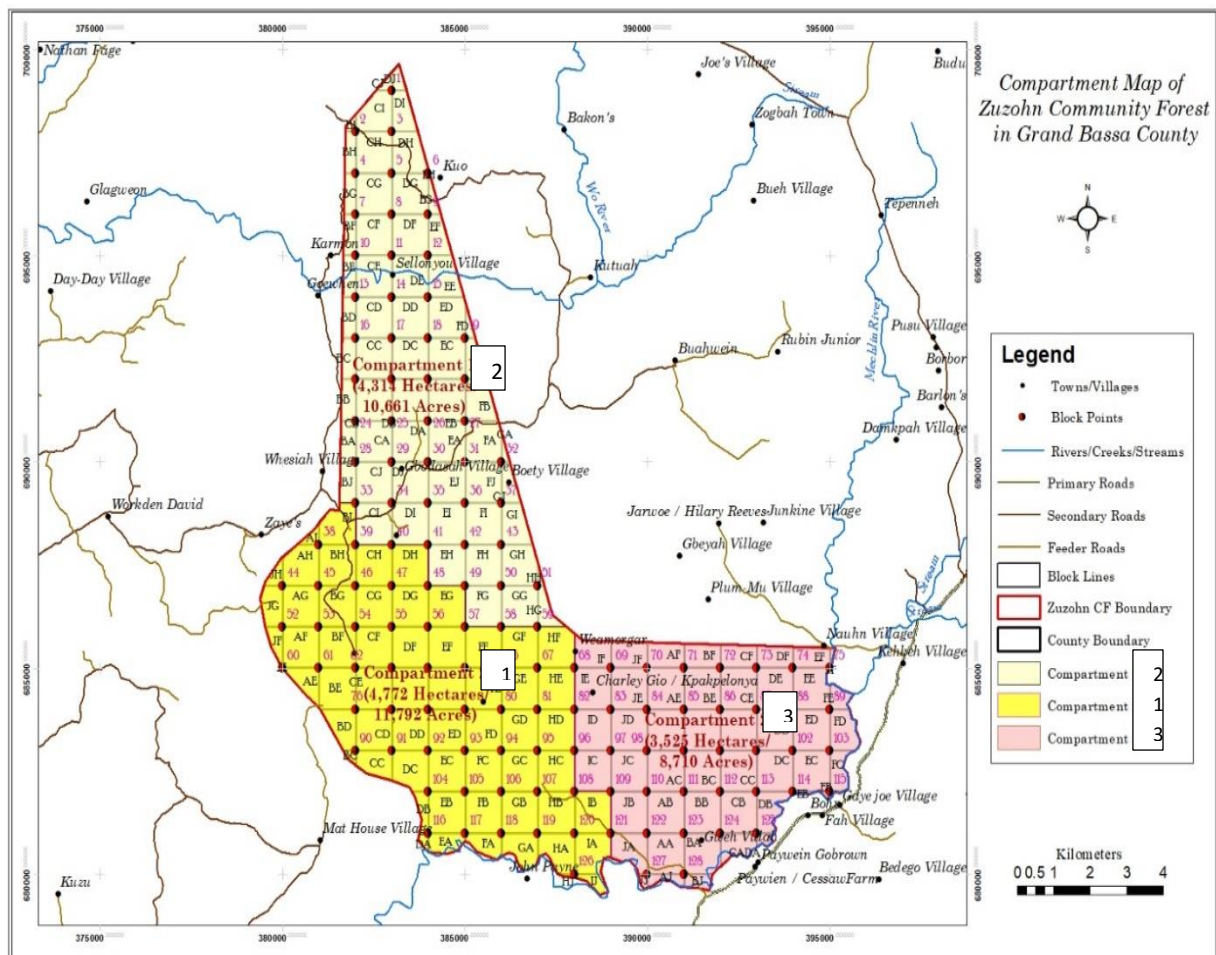


Table B: Definition of the Boundaries & Surface Areas of Annual Coupe One

MEAN_X	MEAN_Y	No	
381000	685000	61	
382000	685000	62	
383000	685000	63	
384000	685000	64	

395000	685000	75	
382000	684000	76	
383000	684000	77	
384000	684000	78	
395000	684000	89	
382000	683000	90	
383000	683000	91	
384000	683000	92	
395000	683000	103	
384000	682000	104	
384000	681000	116	
385000	681000	117	

3.2 Management units within the annual coupe:

The management units comprise of harvestable areas and non-harvestable areas: See table below:

Table C: Harvestable Area for 2018/2019 Logging Season

Description	AREA (ha)
Harvestable Annual Coupe	768
Exclusion Area (4% of total area)	32
Total AC area	800

4.0 Annual Audit Report

BOOMING GREEN LIBERIA INC. is unable to provide an annual audit report for this annual coupe in this annual operation due to the fact this is our first season of harvesting from our contract area. However, in subsequent time, a full audit report that covers the operational periods will be prepared and same submitted.

5.0 Pre-harvest Enumeration Results

As Booming is now commencing pre-harvest operations within the ZCF area, no enumeration has so far been done. Hence, no report for the said chapter is available at the moment. In the next AoP, a detailed report as required will be presented.

5.1 Methodology

The Liberia Code of Forest Harvesting Practices makes provision for the methodology to conduct inventory in the annual coupe as indicated below: The annual coupe area is divided into km-square blocks

to facilitate the work of inventory crews; and 100% forest inventory of the blocks with markings, tagging with barcodes and recording of all trees from 50cm DBH and above.

5.2 Criteria for harvestable trees selection

Though 100% inventory is to be conducted in blocks earmarked for the annual coupe, the following criteria were used in selecting timber trees to be harvested:

1. Minimum diameter cut limit (MDCL) of 60cm and above is the required diameter for harvest;
2. Bad quality and dead trees may not be felled, depending on the decision of Management. However, dead trees with commercial value will be harvested and extracted;
3. Location of trees is considered, especially those located in protected areas or in buffer/exclusion zones or on deep slope;
4. Harvesting limit per block will be 30m³/ha on each block.
5. Market demand and pricing

According to this Annual Operational Plan (AOP), all harvesting operations will adhere to the guidelines for Forest Management Planning in Liberia and Code of Forest Harvesting Practices. The targeted production figures are based on the distance of hauling. Only logs/sawn timber for containerized shipment will be transported to the port of Buchanan.

6.0 HARVESTIBLE AREA

6.1 DESCRIPTION OF COMPARTMENT:

Due to the duration of the contract and size of the forest, twelve thousand hectares (12,000 ha), BOOMING GREEN LIBERIA INC. has divided the community forest into 3 compartments as per requirement. Each compartment will be operated on a five years basis in an annual coupe system. It means that in each compartment, there will be five annual coupes. Each compartment will cover a total of 4,000 ha with each annual coupe comprising 800 ha. See table below.

6.2 Respect of the Annual Coupe Delineation Rules:

As a law abiding company, BOOMING GREEN LIBERIA INC. seeks to achieve proper management of the concession area more specifically the 2018/2019 annual coupe for the following reasons:

1. The production of merchantable time on a sustainable basis while at the same time protects the intrinsic forest resources for environmental, social & economic benefits for all stakeholders;
2. Plan, construct and maintain forest infrastructure such as roads, bridges, culverts, skid –trails and logs landings where necessary;
3. Observe environmentally sensitive areas for the protection of river, buffer zones and wildlife habitats that may be identified during pre-harvesting survey works;

4. Application of best timber harvesting techniques for efficiency and cost effectiveness while eliminating or minimizing the adverse impact of logging;
5. Application of appropriate environmental-friendly management practices and monitoring for impact mitigation

7.0 PLANNING OF WORKS

7.1 Planning of logging activities

BOOMING GREEN LIBERIA INC. is enumerating a total of 8 blocks for the 2018/2019 annual coupe; and these blocks are DE, DD, BD, BE, EB, CF, DC, CE & CD.

While we are prepared to operate in these blocks, rehabilitation work on the roads & bridges leading to our concession area have commenced; the work are in line with the Liberian Ministry of Public Works specifications.

7.2 Planning of other activities:

The Management of BOOMING GREEN LIBERIA INC. is preparing an Environmental & Social Management Plan (EMP) which will be reviewed for the purpose of updating to reflect the current reality in the concession area.

8.0 FOREST INFRASTRUCTURE

8.1 Main and Secondary Roads within the Annual Coupe:

In logging, roads are essential feature for forest harvesting and transport. Accordingly, there is a main road entering into the Annual Coupe of the Contract Area from the Grand Bassa – Sinoe Highway. Booming Green Liberia Inc. is constructing secondary roads designed according to sound environmental engineering practices in line with the Code of Forest Harvesting Practices. These secondary forest roads are designed to provide access to the first forest compartment, thus providing access to the compartment. Tertiary roads will be built in order to give access from one block to another. Rehabilitation of access road will continue throughout the life of the contract, while new ones will be constructed based on our harvesting schedule to facilitate easy haulage of round logs to landings. The planned road network and skid trails will be constructed in line with the Code of Forest Harvesting Practice.

8.2 Description of Landing and Skid Trails

8.3 Landings:

Management has taken into consideration that our landings will be 250m to 1000m apart; they will be constructed according to specifications in the Code of Forest Harvesting Practices. The landings will be 40m X 50 m in size; each one will not exceed 0.8 ha per unit area of 100 ha, i. e. four (4) landings per square kilometer block.

8.4 Skid Trail:

All of our skid trails will approach the landings from below to avoid directing runoff of water to the landing as per the Code. These skid trails are meant for the CAT Skidder to transfer the felled logs from stump site to the landings. They will be designed and marked according to the Code. The trails have a width of 4 m and will be marked before the start of the felling operation in an effort to assist the feller in determining the direction of fall.

9.0 Labor Requirements:

Qualified and competent labor force forms the basis of every successful production operation. As a registered Liberian business entity in the forest sector, the company will endeavor to employ qualified and competent Liberian workforce for the achievement of its business objectives. It is anticipated that the initial permanent workforce 38 personnel will be employed and our employment scheme will be increased within the first five (5) years of operations depending on the volume of work to be done.

As a responsible business entity, we will employ both Liberian and expatriates alike on the basis of competence. Moreover, BOOMING GREEN LIBERIA INC. intends to train young Liberians in various specialized areas in logging and wood work as a contribution to the human resource development program of the country as well as contributing to Government's Pro-poor Agenda for Prosperity and Development.

TABLE D: SHOWING INITIAL PERMANENT WORKFORCE OF THE COMPANY

No.	Position Local	# of staff
1	Administration	5
2	Logging Operation	20
3	Technicians	7
4	Post workers	6
TOTAL		30

10.0 LOGGING REQUIREMENT AND MACHINERY:

The Management of BOOMING GREEN LIBERIA INC. has procured the below pieces equipment in preparation to begin production.

TABLE E: LOGGING EQUIPMENT AND MACHINERY INC.

Name/Make	Description	Quantity
Shantui	Doser	9
Shantui	Motor grader	4
Shantui	Skidder	0
Shantui	Wheel Loader	5
Shantui	Excavator	2
Shantui	Log Trailer	12
Shantui	Load bed	2
Shantui	Labor Trick	4
Shantui	Fuel tank	2

Shantui	Pickup	2
Shantui	Jeep	1
Shantui	Generator	6
Shantui	Chain saw	20
Shantui	Welding machine	1

11.0 ENVIRONMENTAL ISSUES

The Company will maintain environmental quality of the cutting area and comply with other conditions consistent with the Liberia Code of Forest Harvesting Practices to include:

- a. Water course protection
- b. Erosion prevention
- c. Prevention of pollution of rivers, streams and other waterways by disposal of wastes
- d. Prevention of fire disaster

The operation shall also be in conformity with international conventions to which Liberia is a party. They include: The Convention on Biodiversity, the International Tropical Timber Agreement, the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, and the Convention on International Trade in Endangered Species and the RAMSAR Convention on Wetland Management.

11.1 DESCRIPTION OF THE PHYSICAL ENVIRONMENT:

11.2 Soil Erosion

Local communities are engaged in alluvial gold mining in the rivers, streams and creeks within the contract area; thus soil erosion is common along the banks of these rivers, streams and creeks.

11.3 Water

The Zuzohn Community Forest Area is drained by a number of seasonal Creek and rivers. The seasonal streams and rivers flow in a number of directions. The management of BGLI is well aware of the need to protect the integrity of these water bodies as it operates. However, it is almost impossible to conduct logging work without interfering with the water course. As such best practices will be employed throughout our operations in order to protect water courses.

Management recognizes the three types of water crossing (bridges, culverts or pipes, and fords); everything will be done to ensure that watercourses are crossed at right angles according to the Code of Forest Harvesting Practice.

12.0 HEALTH AND SAFETY

In forest harvesting operation there are three inputs (Human, Machines & Materials) which are combined to produce outputs; these inputs are always present in the work environment in the forest and the risk involved are placed in one of the below categories: Climate, Site & Terrain.

In the event of any risk to workers that be derived from climate, site and or terrain, the necessary framework has been put in place to provide basic social service to workers and operators of all machines and equipment will be provided with the required safety / personal protective gears as provided for in the Liberia Code of Forest Harvesting Practices.

Table F: Activity Planning/Implementation Chart: Year/Month

Activity	AoP Plan/month											
	1	2	3	4	5	6	7	8	9	10	11	12
Mobilization of equipment/ logistics												
Pre-harvesting enumeration												
Carry out Environmental & Social Impact Study												
Construction & rehabilitation road network												
Submission of the AOP for approval												
Log felling												
Extraction												
Transport												
Export												

13.0 CONCLUSION

The 2018/2019 Annual Operation Plan will serve as a guide during the company's first year of logging operations. The Management of BOOMING GREEN LIBERIA INC. will ensure that it observes all social and environmental issue most especially keeping provision of the core of forest harvesting practices.

This AOP will be updated at the end of the first year of operation and an annual audit report will also be prepared for the 1st year Logging Seasons.