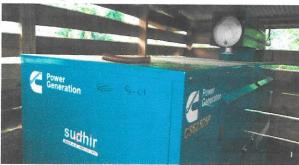
# SING AFRICA PLANTATION LIBERIA INC.

Bluyeama Clan Zorzor District

**Lofa County** 













Environmental Audit Report (EAR)
Prepared by:

Forest and Environment Research Institute (FERI)

Cell #s: +231-886-593-292/0770-215-789 Email:forestenviroment@gmail.com

MONROVIA, LIBERIA August, 2019

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#### Acronyms

CoC - Chain of Custody

EAR, - Environmental Audit Report.

EPA - Environmental Protection Agency

EPML - Environment Protection and Management Law

EMP - Environmental Management Plan

EMS - Environmental Management System

FDA - Forestry Development Authority

FERI - Forest and Environment Research Institute

SAPL, Sing Africa Plantations Liberia Inc

#### **Executive Summary**

The creation of the Environmental Protection Agency, the EPA in 2003 and enacting the Environmental Protection and Management Law, EPML, continues to make significant impacts in the management of the environment in Liberia.

It is based upon these legislations and environmental laws that an environment Impact studies was conducted for the Bluyeama Community Forest. The Bluyeama Community Forest is located in Bluyeama Clan, Lofa County. This Community Forest was established and owned by the Bluyeama Clan. The Bluyeama Community Forest reached the age to be harvested, therefore, the Government of Liberia, through its responsible agent; the FDA awarded the contract to the Sing Africa Plantations Liberia, Inc. a Logging Company to carry out logging operations that will lead to the supply of wood/timber for both the local and international market.

This Environmental Audit Report, EAR was one of the permit conditions placed by the EPA to guide and monitor compliance to the EMP during and after the Company's operations.

The project was predicted to impact the physical, biological and social component of the environment in the contract area. Consequently, a mitigation plan was prepared as was contained in the EMP.

<u>Vegetation</u> - the vegetation of the forest was impacted by the felling of large tree which created opening of the canopy.

<u>Wild life</u> -the logging operations affect the animals' community by roads construction and noise from machines; their habitat can be fragmented.

<u>Water Resources</u> – logging also has impact on water resources by road construction, creation of landing and skid trails; provokes degradation of surface water quality resulting from surface runoff containing large amount of water soluble substance and heavy metal.

<u>Aquatic Resources</u> – logging also contaminates water when petroleum products are carelessly spilled on the forest floor, domestic wastes and siltation leading to impaired water quality which results into decimation of aquatic life.

<u>Air quality and Noise</u>- Operation of heavy duty machines producing noise above a threshold level disrupt acoustic communication between faunal populations. These heavy duty machines also produce dust and emit particulate matter and nitrite and sulfate into the air.

<u>Safety and Health</u> – logging operations especially felling and wood processing increased the risk of accident among personnel. There is also the risk of involuntary ingestion of fuel, gasoline and oil, and inhaling of dust and sawdust.

This Environmental Audit did not observe a significant impact during the period under review.

However, this EAR marks the bench mark to monitor the Company's activities in subsequent audits. What our team observed was significant infrastructural development; entire main road was rehabilitated with the major bridge on the refurbished making the Bluyeama Clan accessible by vehicles. When we went to conduct ESIA, we used motor bike to reach the Bluyeama Clan.



#### 1.0 Background

#### 1.1 Project Title and Project Proponent

The Project Title is Bluyeama Community Forest, Logging/harvesting. This Project is a logging or Timber Harvesting Project, and owned by The Company, Sing Africa Plantations Liberia, Inc. Responsible Person is Mr. G. R. Kuma, Chief Executive Officer +231 776702224 +231 881366059 <a href="mailto:kumar@agroplantations.com">kumar@agroplantations.com</a>

#### 1.2 Description of the Environment

The Project Environment is a Community Forest located in a local communities or a tribe, Lorma in the Bluyeama Clan, Zorzor District, Lofa County. The forest is located in Bluyeama Clan specifically between Foryeama Village with coordinates N29 0419197 UTM 0861163, a village under Balagwalazu Town Coordinates N29 0421171 UTM 0862006, Libeliba Town, coordinates 29N 0422886 UTM 0868488, Bardazu Town coordinates 29N 0426543 UTM 0868780 and the boundary between Lofa and Gbarpolu counties.

Sing Africa Plantation Liberia, Inc. a Community Forest Management Contract Area is classified according to the Geographic Information System and Remote Sensing Laboratory of FDA as secondary forest with patches of degraded forest area. The landuse for the community is small agricultural practices with shifting cultivation and tree crops farming to include cocoa, coffee, plantains, etc. These practices are carried out around the towns and villages in the clan within a radius of three kilometers, while the remaining forest is from secondary to primary contracted out for logging.



# 1.3 Summary of Findings

This Environmental Audit Report (EAR) established that Logging Operations in this project area is slow down due to the raining season within the Bluyeama Communities Forest Management Agreement (BCFMA).

The community members told the Audit Team that the Company has been doing well with their promises: the main bridges on the route are rehabilitated with major culverts placed on the main road making transportation easy for both vehicles and motorbikes. This road rehabilitation brought relief to the communities

The following however, constitute findings of the audit:

- Water source- two hand pumps installed and providing safe drinking water to the logging camps.
- The Company built two (2) logging Camps. Camp one (1) is the resident of the Company's Managers that also contained offices, storage, workshop, and Camp two (2) is for the Liberian Staffs that work for the Company.
- Roads network The Company has rehabilitated roads within the concession area and are regularly maintained.
- Felling The Company is following the felling method for the harvesting of timber tree species.
- ♣ Harvesting method a power trailer is used for the extraction; the forest is not bladed
- Transport mode The Company transport logs on trailers to the Buchanan Sea Port for shipment.
- Training The Company has trained some of the local staffs in the area of heavy equipment movement, chain saw operation, and driving.
- Employment The Company has employed must of the worker from the affected communities.



#### 2.0 Purpose of Project and Objectives of Environmental and Social Impact Statement

#### 2.1 Purpose of the Project

Sing Africa Plantations Liberia, Inc. was awarded a Community forest Agreement Contract in Bluyeama Clan, Zorzor District, Lofa County by the people of the Bluyeama Clan. These blocks of forest are expected to be managed in an environmentally sound and friendly manner.

The project was planned for the harvesting of logs from these blocks of forest. Sing Africa Plantation Liberia, Inc. activities in the Bluyeama Communities Forest cover a land space of 49,444 hectares.

The Company commissioned this environmental Audit Report to certify the application for the renewal of Environmental permit which expired this year. The work of the company was concentrated in Bluyeama Clan, Zorzor District, Lofa County, as dictated by the new Forestry Laws of 2006. These developments led the Company to Forest & Environment Research Institute, Inc. (FERI) which had conducted the Environmental Impact Studies to proceed with the audit.

FERI, after two meetings with the Administration of the Company, commissioned an audit team which comprised two persons from FERI and one person from the Company. The team was given specific instructions as it proceeded to the Bluyeama community Forest contract area.

#### 2.2 Audit Scope, Objectives, and criteria

#### Audit Scope

This Audit Report intends to assess all the potential environmental and special consequences which Sing Africa Plantation Liberia, Inc. Company's logging operations had on the contract area in which it is operating; covers waste management, roads landings and hazard management.

### Audit Objectives

The objective of this Audit Report was to assess the level of compliance of the EMP and all other related guidelines submitted to the EPA and other related Agencies by the concession which necessitated the issuance of operational license or certificate by the EPA to operate.

#### Audit Criteria

The procedure adapted for the audit includes but not limited to meetings, sites inspection, and report writing



Opening meetings were held with the Management of Sing Africa Plantation Liberia, Inc. Company in Camp # 1 and in the field, Bluyeama, Lofa County. The meetings aimed at acquainting the Company with their role toward the Management of the nature/environment. At that meeting, the purpose of the Audit as well as the process involve were also highlighted. During that meeting, the company was represented by its field Manager and other Top Management personnel. The Management accepted the team and pledged their fullest cooperation during the audit period in the concession.

#### 2.3 Site Inspection

Site inspection was a tedious under takings by the Audit's Team due to bad roads condition. However, after many frantic attempts, a member of FERI took motor bike and wade the impediment. The mandate of audit was achieved by making a successful trip. Specifically, the audit process was designed to look at key issues such as:

- a. Field Office/infrastructural development
- b. Health and safety
- c. Employment
- d. Sanitation
- e. Training of staff
- f. Logs landing, transport and felling methods
- g. Waste management
- h. Fuel handling, etc.

#### 2.4 Auditors and Audie's

The audit's team comprised of one person from Forest & Environment Research Institute who was joined by representatives of the Company on site.

#### 2.5 Reference Documents

The Environmental Impact Studies Report for the Sing Africa Plantation Liberia, Inc. which includes the Environmental Management Plan, social standard, and monitoring procedures were found to be adequate for the full implementation of the project.

- o Environmental and Social Impact Studies
- o EMS documentation (Environmental Management Plans EMP, Environmental and Social Standards, Environmental Procedures, and Monitoring Reports)

During the Audit, sites of operation were inspected and primary documents that are related to the project were reviewed to establish the basis for compliance and noncompliance.

#### 2.6 Review of Previous Audit Recommendations

This Audit is the first in series after the Company was given permit to operate the concession; it therefore, this audit forms the bench mark for succeeding audits



### 3.0 Site Activity Summary

Generally the team observed the activities of Sing Africa Plantation Liberia, Inc.in compliance with the EPML. It has been meeting with its financial obligations with Government of Liberia and the community, but hasn't met with some social obligations especially with the communities.

#### 3.1 Industrial facilities

The company has almost completed a large sawmill and will be producing a variety of products including: ply wood, planks etc. This facility is under a separate Permit from the EPA.

#### 3.2 Development Projects

The Company built some structures to house its workers and office facilities. Hand pumps, toilets and facilities are placed.



#### 4.0 Audit Findings

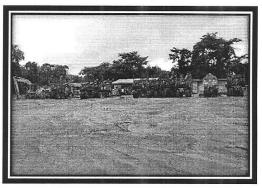
### 4.1 Site Inspection and Document Review

During the Audit, sites of operation were inspected and primary documents that are related to the project were reviewed to establish the basis for compliance and noncompliance. The following are the audit's findings:

- Water source- two hand pumps installed and providing safe drinking water to the logging camps.
- The Company built two (2) logging Camps. Camp one (1) is the resident of the Company's Managers that also contained offices, storage, workshop, and Camp two (2) is for the Liberian Staffs that work for the Company.
- ❖ Roads network The Company has rehabilitated roads within the concession area and are regularly maintained.
- ❖ Felling The Company is following the felling method for the harvesting of timber tree species.
- ❖ Harvesting method a power trailer is used for the extraction; the forest is not bladed
- Transport mode The Company transport logs on trailers to the Buchanan Sea Port for shipment.
- Training The Company has trained some of the local staffs in the area of heavy equipment movement, chain saw operation, and driving.
- Employment The Company has employed must of its workers from the affected communities.

# 4.1 Camp Sites: GPS Coordinates: Camp #1: 29N 0419928 UTM 0861528 Camp #2: 29N 04195996 UTM0861335

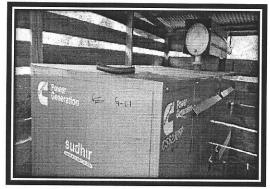


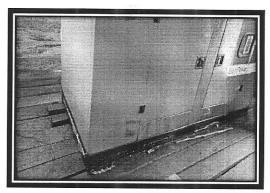


At the Camp Site of Sing Africa Plantation Liberia, Inc. the following components of the company's operation were audited. As a result of the audit, the below constitute the findings:

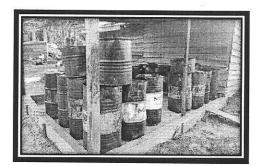


**A. Generator House:** The Company has a private portable generator which is the source of electricity for the nine housing unit- camp. The generator is housed in a wooden structure.



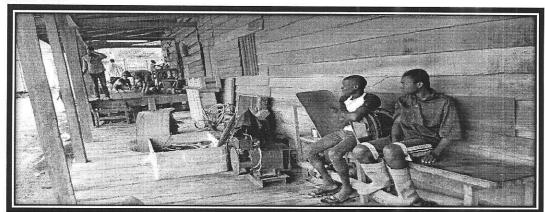


**B.** Fuel Storage: The is a storage facility for the storage of fuel and lubricant at the moment the supply of petroleum and lubricants are procured from Monrovia in bulk and transported to the project site in barrels and stored in a building or store room while a fuel tank is been constructed with concrete floor.





C. Garage or Workshop: The Company has a well-planned workshop that is closed to the camp for equipment maintenance purposes and equipment storage. The workshop is not far from the camp and other facilities; temporary maintenance and repair works are carried out.



**D. Waste Management:** The Company has a properly located domestic wastes disposal area that is some 100m away from the camp where wastes are disposed in sound and proper manner. Other waste like liquid, solid and non-biodegradable wastes are kept in drums for reuse purposes for equipment lubrication.



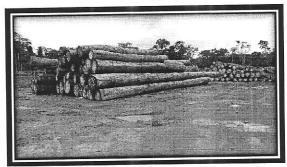
### 4.2 Landings:

The team visited two landings at the company's operational site. There was active logging activities at these landings, but about two hundred pieces of logs were seeing at these sites. The company planned to take these logs to the saw milling that is located in the forest.

# 4.2.1 Logs Landings: GPS Coordinates: 29N 0412646 UTM 0858546

The team visited the landings of the company, there are two landings at the company's operational site. The site verification show there was active logging activities at these landings, but about two hundred pieces of logs were seeing at these sites. The company planned to take these logs to the saw milling that is located in the forest.





#### 4.3 Accident

During the records review period, there was no major incident/accident or death recorded during the period under review. There were minor issues of injuries recorded that were quickly taking care of at the nearby health post in the concession area.



#### 4.4 Employment

The company has a total workforce of Seventy nine (79) Liberian personnel including one female and about Twenty four (24) expatriate. Many of the workforces were drawn from the community.

#### 4.5 Water source

Access to safe drinking water is still a challenge; the Company up to now has installed two hand pumps to provide safe drinking water to the logging camps.

#### 4.6 Latrines

The company constructed flushed toilets in their housing units in both camps of the company which are properly maintained.

#### 4.7 Health Post

The company has no clinic; all emergency that occurs are sent to the health post in Balagwalazu Town. The Company's workers take treatment, when there is a need for medical attention or transported to Zorzor City, Lofa County.

# 4.8 Company and Community Relations

The company has a Public Relations Officer who is responsible to provide or forward the company policy to the communities. The company has intervened in the community socio-economic development with the provision of jobs, hand pumps, building of bridges and reconditioning of roads.

The relationship between the Company and the communities is dwindling; there is a need to revisit the Social Agreement to attach time frame to some of those things that were contained therein. Also, there are other additional things that these communities are requesting now which the SA was silence on; the Balagwalazu is complaining that the Company's support to the clinic where they take their workers for daily treatment is not enough.

Foryeama Village also complained of some damages to their crops without notification. There is also a problem with the Company's Security as regards free movement of people.

When Mr. Kokolo Crawford, a member of the Bluyeama Community Forest Body was asked about these complaints he admitted but said there was no timeframe set for the Company to construct hand pumps, latrines, palava huts, etc. But they are waiting for the set renewal time for the revisit and renewal of the SA, which is drawing to a close.



#### 4.9 Grievance mechanism

There is a body set up from each of the affected communities of the three counties known as the CFDC (Community Forest Development Counsel). The body is the liaison between the community and the company. All complains are channeled through the body. This process is fully functional to date. There is a body set up from each of the affected town in Bluyeama.

#### 4.10 Review of Previous Audit Recommendations

As was mentioned earlier, this Audit is the first in series after the Company was given permit to operate the concession; it therefore forms the bench mark for succeeding audits.

#### 4.11 Field Office Logging Camp

Compliance:

Fire extinguishers present everywhere in the camp.

❖ Power source, there are three (3) Generators in which the two camps obtain power from.

#### Noncompliance:

❖ Fuel spillage: some fuel spillage was observed from the power house and the workshop. Immediate cleaning up was recommended and done before the audit proceeded.

❖ Damaged machines vehicles, damage spare parts and used tires are not

disposed.

Wastes management is still a problem, though there is a designated site.

## 4.12 Water QUALITY

Water quality shows some variation as shown in Annex one of this reports on page 20. Water samples were collected from the closet water source of the previous hand pump water samples were collected from in 2017, because all of those pump are damaged.

# 4.13 Monitoring Reports and Trends

The monitoring and reporting processes of the Company's operation is opened for monitoring by the EPA and the FDA anytime. EPA hasn't been there for about six months ago, while FDA is always there in every two months.

#### **4.14** Noise

During the time of the Audit, there was no noise pollution experienced at the project site.



# 4.15 Environmental Management Systems and Management commitment

The Company is committed to its Environmental Management Plan (EMP) submitted to the EPA, especially for the camps.

#### 4.16 Previous Audit Results

This report is the first audit report and now forms the bench mark for future audits during the Company's logging operations in area.

### 4.17 Summary of Corrective Actions Status

#### 4.18 Improvement Opportunities

The Company has a new approach of how to improve on its operations and community relations by the keen applications of the EMP in all its activities

# 5.0 Conclusions and Recommendations Environmental Audit Report Annexes

#### 5.1 Conclusion

Conclusively, there is a need for the Forest and Environment Research Institute (FERI) personnel to closely monitor the company's operations to guide them in full compliance of the EMP. These Monitoring Processes should be quarterly for internal review while the EPA carries out its statutory functions.

#### 5.2 Recommendations

Therefore; the following are recommended for Sing Africa Plantation Liberia, Inc. to take immediately for actions;

- Ensure the employment of an environmental Health and Safety issues as contained in your EMP are keenly followed and applied.
- It is also recommended that Sing Africa Plantation Liberia, Inc. conducts its quarterly monitoring program as contained in the EMP.

## 5.3 Environmental Audit Report Annexes

#### 5.4 Annex 1 Photographic Record



#### Annex-1

# Water and Soil Quality Results for Sing Africa Liberia Plantation Inc. Sample Data Information

Date: September 5, 2019

Sample Matrix: Water and Soil

Laboratory: University of Liberia Civil Engineering Laboratory

Analyst: Alex B. Momo

**Table 1: Sampling Information** 

No. #	Sample Code	Sample Matrix	Source	GPS Coordinates	Analysis Date/ Time
1.	1A	Hand Pump	Balagwala Town	29N 0421246 UTM 0862048	August 29, 2019 5:00PM
2.	2A	Hand Pump	Libeliba Town	29N 0422956 UTM 0868458	August 30, 2019 10:00 AM
3.	3A	Creek-Lekpe	Bardazu Town	29N 0426887 UTN 0868870	August 30, 2019 11:30 PM
4	4A	Soil	Sing Africa Camp #2	29N 0419596 UTM 0861335	August 29, 2019 1:40 PM

Table 2: Parameters and Analytical Methods considered

Parameter	Analytical Method (Test Method)
pH, -log H <sup>+</sup>	Colorimetric Method
Turbidity (NTU)	Turbidity meter
Chloride	Colorimetric Method
Sulfate	Colorimetric Method
Hardness	Multi-meter
Total Dissolved Solids (TDS)	Colorimetric Method
Nitrate	Colorimetric Method
Phosphate	Colorimetric Method
Mercury	Cold Vapor
Oil and Grease	Oil and Grease kit
Manganese	Spectrometry
Ammonia	Colorimetry
Total hardness	Hardness Meter
Total alkalinity	Colorimetry
Dissolved Oxygen (DO)	DO Meter

Table 3: Water Quality Results

Parameter (Unit)	Creek- Lekpe	National Water Quality Standar d Class II
рН	6.58	6.0-9.0
Turbidity (NTU)	5.72	≤ 10
TDS (ppm)	20.58	≤ 1000
Sulfate (ppm)	5.92	≤ 200.0
Phosphate (ppm)	6.82	≤ 0.02
Nitrate (ppm)	3.27	≤ 60.0
DO (ppm)	5.93	≥5.0
Chloride (ppm)	3.92	≤ 350
Total alkalinity (ppm)	7.39	NS
Total hardness (ppm)	28.59	≤300
Oil & Grease (ppm)	0.06	10
Mercury (ppm)	0.05	≤ 0.005
Iron (ppm)	1.03	≤ 1.5
Manganese	0.22	≤ 0.3
Ammonia	2.48	≤3.0

**NB:** Values in bold are above permissible limits; ND = not detected; NS = not state

Table 4: Water Quality Results Continues

Parameter (Unit)	1A (Hand Pump)	2A (Hand Pump)	National Water Quality Standard Class I
pH	6.54	6.63	6.5- 8.0
Turbidity (NTU)	1.95	1.17	≤5.0
TDS (ppm)	73.95	70.38	≤ 500
Sulfate (ppm)	2.85	2.17	≤ 150.0
Phosphate (ppm)	0.08	0.17	≤ 0.01
Nitrate (ppm)	11.58	10.37	≤ 40.0
DO (ppm)	3.95	4.30	NS
Chloride (ppm)	11.74	10.38	≤ 250.0
Total alkalinity (ppm)	6.93	8.38	NS
Total hardness (ppm)	11.48	10.38	≤ 190
Oil & Grease (ppm)	ND	ND	0



Mercury (ppm)	ND	ND	ND	
Iron (ppm)	0.09	0.04	≤ 0.1	
Manganese	0.04	0.08	≤ 0.1	
Ammonia	0.13	0.11	≤ 1.0	

NB: Values in bold are above permissible limits; ND = not detected; NS = not stated

Table 5: Soil Quality Results

No	Parameter	Unit	Analytical Method (Instrumentation)	4A
1	pН		Colorimetry	4.38
2	CEC	NTU	Colorimetry	104.6
3	TPH	mg/L	Colorimetry	ND
4	Sulfate	mg/L	Colorimetry	1.74
5	Nitrate	mg/L	Colorimetry	4.85

Signed: Alex B. Momo

**Chemical Analyst** 

# **Pictorial View**















Blu Clan Lefa County Sing Africa Plantation Liberia

Attendance. lame Luwy · Subustine Gawotoky Citèzen M · Yorgbor 6. Oldman m 5 Ggy flor yanguoù Harris , Korpo Chelee Ker ba M 3 Muhbala Homo 11 11 n Gayflor Yange Zuwy 12 AN HARRIS M V m 11 4 n M F. Mulbah Jun: 5 5 M . I James W. Hams 11 m 11 Johnson M & Sayle 11 m Alegee # Kryba 11 Tumosiah 11 is Joseph

Lebeliba Town Bleyeama Clean Sing Africa plantation Libeliha Concerns: bose who represent us are not educated hose who improved the don't inform its bout forsest law of social agreement eleveen sing Africa and the Community

The educated pepole are in slageana Saif that only those who serves in blugeana Cam represent us.

# Bluzeama Clan

Mame	Allenda	ance.	Position
Gayfior	B. Morris		Town Chief
JUJEAN	Beyen		
Tomes	m. Rayhor		Sec
Morris	Browna		Land Lord
Faruma	1	a 1	
Yersen	Morris		
	V. Morris		

# Bluyeama Clan

# Concerns:

there was agreembletween the company and the citizen that. The Tweth Town with in crem Should halve Cen Road And there is nonthing going on.

'And all Town Should have Echool with in the Clan. and there is nonthing going on There is no concreek Bridge on the Road

Leave our Forest because there is no Develorment.

Foryeama Village II Aug 2019 Elweyeama Clam, Zorzor Destrict Sing Africa Plantation Leberia Affendance

× (	Position
Name i Wolokah Kollie	Chief
1 Ester Sumo	Citizen
2 Belan Flomo	11
y Jame tome	11
5. Zubah Kwah GeBarloe Weefah	
J. Gboly Kolwoy	
7. ABUM	

Lofa country

Folgeama Village

Village Close to Company Cemp

Concerns;

D'one hand bomb vot abto Stewgard.

- Palawa harf with nail and Plant but they refuse to do So.
  - 3 No toillet facitifile for us in the
  - Down bushes has been used by Sing Africa wor ker leaving us to Suffer for food/oi Bour People are Stop by Security for insertion their load in and out of our village