

TONGLAY AUTHORIZED COMMUNITY FOREST MANAGEMENT PLAN



June 30, 2022



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Acknowledgment

The Tonglay Community Assembly through her Executive Committee and the Community Forest Management Body on behalf of the Clan acknowledge the tremendous efforts of the Society for the Conservation of Nature of Liberia (SCNL) and the Royal Society for the Protection of Birds (RSPB) under the EU funded PAPFor Project for supporting the clan acquire its community forest legal status. The Clan also appreciates the administrative efforts of the Forestry Development Authority (FDA), and the Civil Society Organizations (CSOs) for their persistent participatory roles throughout the process. Finally, we express our utmost gratitude to the Voluntary Partnership Agreement – Support Unit Two (VPA-SU2) for their technical and logistical support towards the communities’ capacity building on forest monitoring and the successful development of this plan.

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List of Acronyms

SCNL	Society for the Conservation of Nature of Liberia
RSPB	Royal Society for the Protection of Birds
VPA-SU	Voluntary Partnership Agreement Support Unit
CF	Community Forest
IUCN	International Union for the Conservation of Nature
NTFPs	Non Timber Forest products
CA	Community Assembly
EC	Executive Committee
MRV	Monitoring, Reporting and Verification
REDD+	Reducing emission from forest Degradation and Deforestation
CSA	Climate Smart Agriculture
APW	Annual Programme of Work
FDA	Forestry Development Authority
CSOs	Civil Society Organisations
CFWG	Community Forest Working Group
NUCFMB	National Union of Community Forest Management Body
FAO	Food and Agriculture Organization
CFMP	Community Forest Management Plan
PFM	Participatory Forest Management
CFMB	Community Forest Management Body
NGOs	Non Governmental Organizations
CBOs	Community-Based Organizations
MIA	Ministry of internal Affairs
MOE	Ministry of Education
MOJ	Ministry of Justice
MOA	Ministry of Agricultur
NTFP	Non-Timber Forest Product
SD	Standard deviation

Preface

This Community Forest Management Plan (CFMP) is to guide the communities and their stakeholders to sustainably manage their community forest using Participatory Forest Management (PFM) approaches in line with the Guidelines for Forest Management Planning and Code of Forest Harvesting Practices

This is to ensure that the communities which are dependent on the forests and their various products and ecosystem services derive maximum benefit from the resources therein as contribution to sustainable national economic growth. The plan is intended to achieve the aims of multipurpose and sustainable use of forest and wildlife resources, promotion of ecotourism, carbon trading using participatory approaches by making use of technology to reduce transaction cost and to ensure effective resource management.

This plan is intended to be implemented in accordance with existing governance structures and institutions that have been established under Community Rights Law. One of such institutions is the Community Forest Management Body (CFMB) which has the responsibility to develop and implement the Community Forest Management Plan (CFMP) under guidelines and specifications issued by the Forestry Development Authority of Liberia.

The Community Forest Management is governed by the Community Forest Management Agreement (CFMA) signed between the Forestry Development Authority (FDA) and the CFMB. The duration for the implementation of this plan is 15 years renewable one year to expiration. Therefore, this plan expires in 2037

It is my hope that the efforts put into these plans will bear enduring fruits as we see the plans translated into actions that will lead to the fulfilment of our quest for sustainable management in a manner that delivers benefits at global, national and community levels.

This plan is herewith approved on this day2022

MANAGING DIRECTOR, FDA
HON. C. MIKE DORYEN

Section 1: General information

1.1 Introduction

The implementation of this Community Forest Management Plan (CFMP) will primarily be the responsibility of the Community Forest Management Body (CFMB) which membership is presented in Table 1 below.

Table 1 Membership and profile of the CFMB

Name	Position	Sex	Contact details
Karimu Fofana	Chief Officer	M	0880325044
J Alex Musa	Secretary	M	0886482205
Famata Tamba	Treasurer	F	0555735825
Alhaji Tidjan Kabba	Member	M	0886683882
Abu Kamara	Member	M	0880258123

The partners involved in this plan preparation include the Forestry Development Authority (FDA), the Society for the Conservation of Nature of Liberia (SCNL), the Royal Society for the Protection of Birds (RSPB), the Civil Society Organisations (CSOs): Community Forest Working Group, National Union of Community Forest Management Body (NUCFMB), and the Voluntary Partnership Agreement-Support Unit (VPA-SU2).

1.2 Signing Date of CFMA, Duration of CFMP, 5-Year Review Schedule, and Reporting to FDA

- i. The Community Forest Management Agreement (CFMA) was signed between the Authorized Forest Community represented by **Karimu Fofana, (Chief Officer, CFMB)** and Forestry Development Authority (FDA) represented by **Hon. C. Mike Doryen, (Managing Director, FDA)** on **30th April 2021** (see Annex 5.3 for details)
- ii. This management plan will be operational for a period of fifteen (15) years taking effect from
- iii. The CFMP will be reviewed every five years according to the schedules presented in Table 2 below

Table 2 Schedules for CFMP reviews

Reviews	Date	Remarks
First review		
Second review		
Third review		

- iv. Scheduled dates for submission of management reports to the FDA.

This will be done according to the schedules developed in subsection 4.2 on Monitoring and Evaluation (Table 10)

1.3. Objectives of the CFMP

The primary objectives of the CFMP are as follows:

- i. To manage and use the forest resources in a sustainable manner, and maintain the forest to provide various ecosystem services;
- ii. To encourage and build upon existing community traditions, which promote the conservation of the forest and sustainable forest management practices;
- iii. To promote environmental conservation and ensure biological diversity

1.4 Stakeholder analysis

A number of stakeholders were identified during the socio-economic survey to be important in the sustainable management of the Community Forest (CF). The key stakeholders identified include governmental institutions, NGOs, Community-Based Organizations (including gender, faith-based organizations and farmers associations) and Forest-Based Economic Groups. Table 3 below summarizes information on the various stakeholders.

Table 3 Stakeholder analysis

A. Governmental Institutions – National and/or County Levels							
	<i>Stakeholder Group</i>	<i>Interest in Establishing a CF</i>	<i>Role in Establishment of CF</i>	<i>Potential Role in Managing CF</i>	<i>Importance in Decision-making</i>	<i>Knowledge Level on CF issues</i>	<i>Key Allies</i>
1	MIA	Promote community development	To advocate and protect	Work along with youth, elders and the forest management group.	High	High	Youth, the interim forest management group.
2	MOE	Promote community development	Create awareness	Educate people on forest management issues	Medium	medium	Youth, the interim forest management group.
3	MOJ	Promote community development	Law enforcement	Forest law enforcement	Medium	medium	Youth, elders, and the interim forest management group.
4	MOH	Promote community development	Medicinal sources	Health care delivery	Medium	medium	Youth, the interim forest management group.
B. Non-Governmental Institutions and Projects within and around the community							
	<i>Stakeholder Group</i>	<i>Interest in Establishing a CF</i>	<i>Role in Establishment of CF</i>	<i>Potential Role in Managing CF</i>	<i>Importance in Decision-making</i>	<i>Knowledge Level on CF issues</i>	<i>Key Allies</i>
1	SCNL	To assist applicant community in the CFMA process	To provide financial and material assistance to community	Education and awareness	High	High	Youth, elders, and the forest management group.
2	VANDENCO	To assist applicant community in the CFMA process	To provide financial and material assistance to community	Education and awareness on sustainable forest management	High	High	Youth, elders, and the forest management group.

C. Community-Based Organizations, including Gender, faith-based and Agricultural Institutions within the community							
	<i>Stakeholder Group</i>	<i>Interest in Establishing a CF</i>	<i>Role in Establishment of CF</i>	<i>Potential Role in Managing CF</i>	<i>Importance in Decision-making</i>	<i>Knowledge Level on CF issues</i>	<i>Key Allies</i>
1	SABUNYUMA	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
2	KYC	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
3	KDDC	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
4	UWO	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
5	Hand put it Hand take it	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
6	KFU	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
7	GolaMa Gongo Group	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
8	Kungboh Muslim Association	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
9	Kissi Group	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
10	Nimba Kwado	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
11	Lofa togetherness	To promote community development	Attend meetings and provides financial assistance	Provides labour, cash, and protection services	High	High	Elders and the interim forest management group
D. Forest-Based Economic Groups, including Timber, Hunting and other NTFP harvesting/trade Groups within the community							
	<i>Stakeholder Group</i>	<i>Interest in Establishing a CF</i>	<i>Role in Establishment of CF</i>	<i>Potential Role in Managing CF</i>	<i>Importance in Decision-making</i>	<i>Knowledge Level on CF issues</i>	<i>Key Allies</i>
1	N/A						
2	N/A						
3	N/A						
4	N/A						

Section 2 Demographic information and general description of the community forest

2.1 Location and Extent

The Tonglay Community Forest Management Areas covers a total area of about 19,594 hectares (195.94 km²) and is located between 840000 N to 860000 N and 310000 W to 330000 W. The Community Forest (CF) falls within the Gola Forest corridor in western Liberia bordering Sierra Leone to the North-West in Kongbah District, Gbarpolu County. The forest is ideally situated between the Gola National Forest Park at the South-West and the Foya Proposed National Park at the North-East (Figure 1).

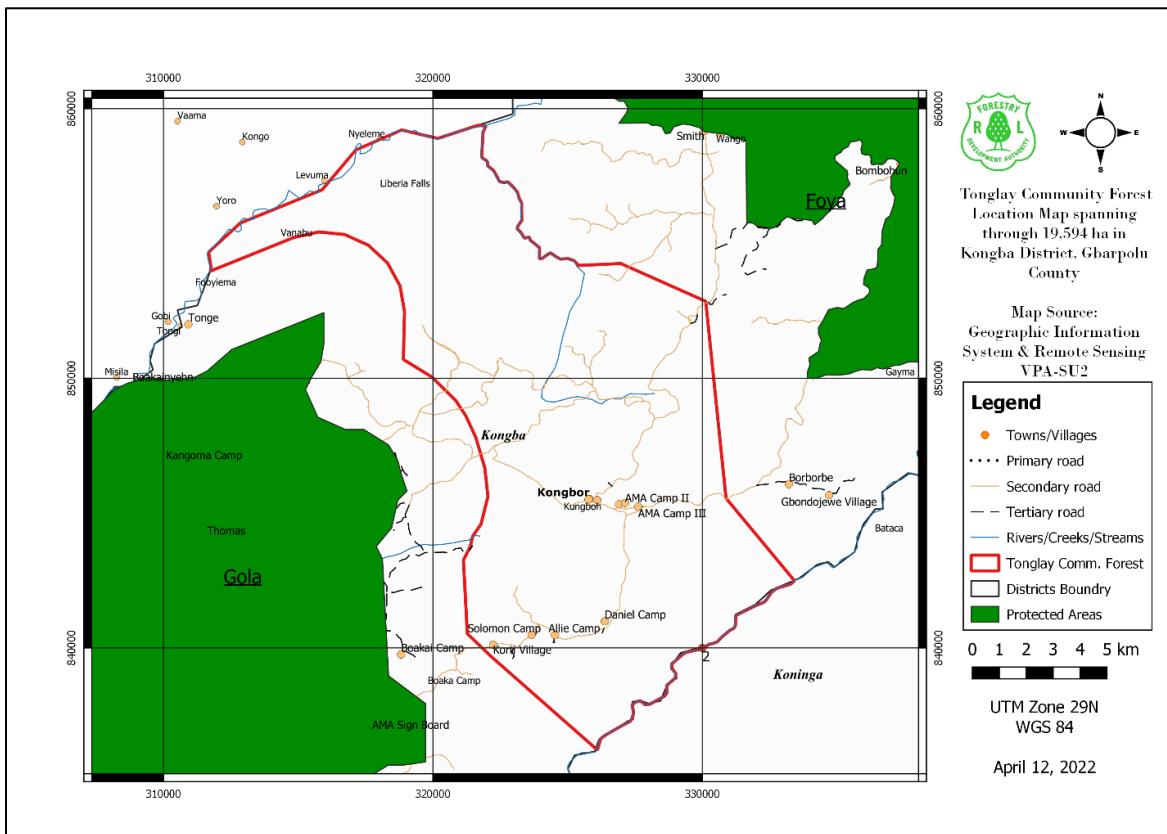


Figure 1 Location map of Tonglay Community Forest

2.2 Demographic Information

Six (6) communities are responsible for the management of the Community Forest. The six communities include Kungboh, Camp Alpha, Daniel Camp, SLC Camp, Kotee Village and Tonglay. The total population of the six communities is 6,860 with an average literacy rate of about 19%. The main ethnic groups are Madingo, Mende, Gissi and Gola. The people living in the communities are both muslims and christians (Reference: SERS of 2019).

2.3 Past Management

The community forest is said to have been logged by the SLC Logging Company in 1985 followed by the ULC Logging Company which entered Tonglay in 1986. The community forest was also mined by the AMA diamond mining company in 2005, YDMC diamond mining company in 2008

and TRECO diamond mining company in 2009. Current usage of the community forest by the communities include subsistence farming, artisanal mining, pit sawing, hunting, fishing, and NTFPs collection such as nuts, fruits, mushrooms, snails, rattan, poles, medicinal plants, ropes, palm wine, and palm thatches. The community forest however maintains 97% of its vegetative cover. See Annex 5.7 NTFPs listing & usages

2.4 Land cover Types

The CF is covered mainly by primary forest or Closed Forest ($\geq 80\%$ canopy cover) with few patches of secondary forest or Open canopy forest (30-80% canopy cover). There are few pockets of non forest vegetation spread within the CF. (Figure 2).

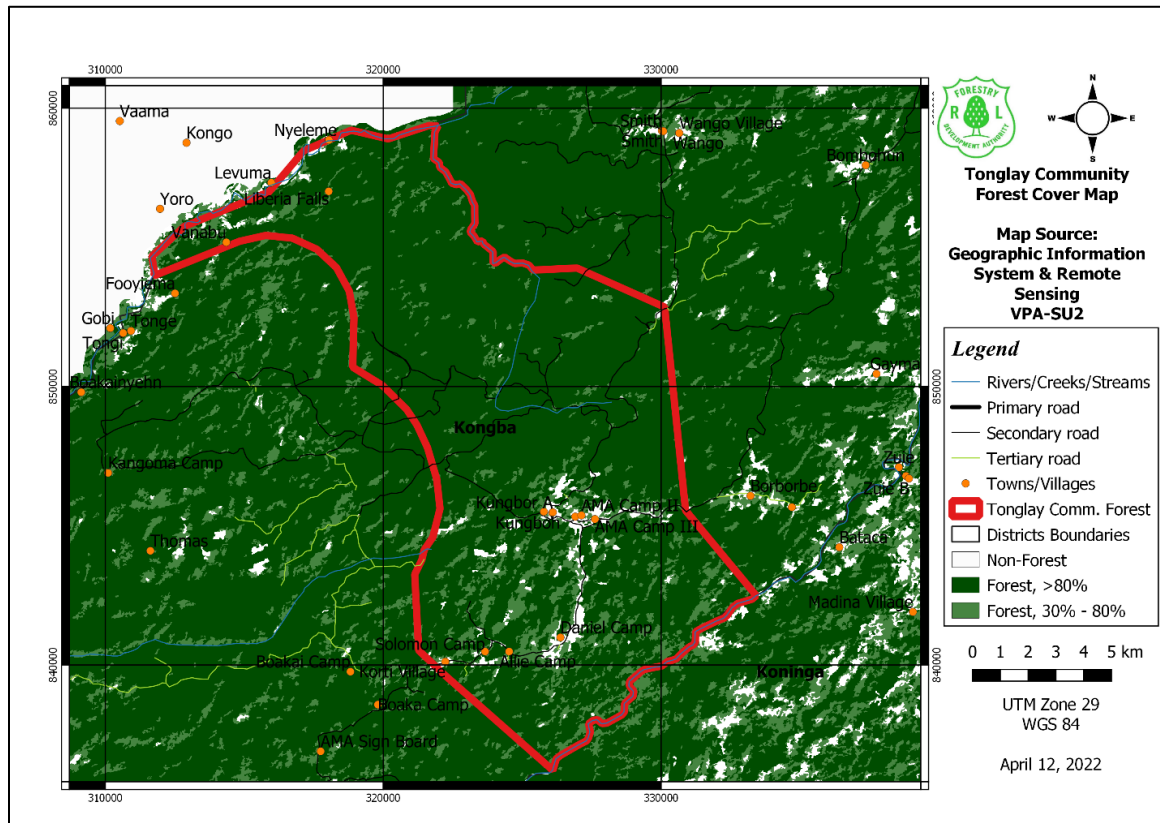


Figure 2 Forest cover map of Tonglay Community Forest

2.5 Flora

A total of 1,017 tree species representing 138 species that fall within the 11 diameter class ranges of < 10 cm, 10-19.99 cm, 20-29.99 cm, 30-39.99 cm, 40-49.99 cm, 50-59.99 cm, 60-69.99 cm, 70-79.99 cm, 80-89.99 cm, 90-99.99 cm, ≥ 100 cm were recorded in the CF. One plant species is categorized as Endangered on the IUCN Redlist (*Warneckea fascicularis*). This species is considered to be of global conservation concern (See Annex 5.7). On average the CF has 216 stems/ha (30%-80% canopy cover) and 423 stems/ha (80%-100% canopy cover). The mean basal area estimate is 10.81 m^2/ha (30%-80%) and 27.43 m^2/ha (80%-100%) whiles tree bole volume estimates per hectare is 123.005 m^3/ha (30%-80%) and 291.281 m^3/ha (80%-100%) (See Tables 4

and 5). The estimates of mean basal area and volume per hectare for the CF indicate that the area is well stocked. The stand tables for stem number, basal area and volume estimates per hectare for all species grouped according to diameter class are presented in Annex 5.7.

Table 4 Stocking, basal area and volume estimates per hectare for all trees (30% -80% canopy cover)

Factor	Trees_ha	BA_ha	Bole_vol_ha
Mean	216.9	10.81949	123.005
Standard deviation	129.0	8.071929	102.6148
Coefficient of variation	0.59	0.746054	0.834233
Error Margin (95%)	73.8	92.63487	103.5837
Error Margin (90%)	56.7	71.12813	79.53498

Table 5 Stocking, basal area and volume estimates per hectare for all trees (80% -100% canopy cover)

Factor	Trees_ha	BA_ha	Bole_vol_ha
Mean	423.9518	27.43249	291.2817
Standard deviation	140.2287	11.34503	148.586
Coefficient of variation	0.330766	0.413562	0.510111
Error Margin (95%)	13.96701	17.46319	21.5401
Error Margin (90%)	11.57159	14.46815	17.84585

2.6 Wildlife

The Tonglay Community Forest is home to a diversity of birds, amphibians and mammals. Fauna species recorded during the biodiversity assessment include birds (*Malimbus ballmanni*, *Buceros bicornis*, *Ceratogymna elata* etc), amphibians (*Hyperolius chlorosteus*) and mammals (*Loxodonta africana*, *Potamochoerus porcus*, *Cephalophus sp* etc). The *Loxodonta africana* is considered to be Critically Endangered while *Cercocebus atys*, *Buceros bicornis*, *Ceratogymna elata*, *Criniger olivaceus* and *Ceratogymna elata* are categorized as Vulnerable on the IUCN Red List. The rest of the species recorded are of Least Concern. The socio-economic survey suggest the presence of other wildlife species of high social economic and biodiversity importance. Some of the fauna species reported to be present include primates such as Baboon/ chimp, monkeys, red and olive colobus, black and white colobus, jacko, lady monkey); duikers (red, black, gazelle, black back, mountain, yellow back, zebra), royal antelope, ground hog, porcupine, squirrel, opossum, mongoose, turtle, snakes (cassava, black, green and yellow, water, black and red stripped), crocodile, iguana, bush cow and leopard among others. (See Annex 5.7 of flora and fauna species list).

2.7 Relief

The CF is generally hilly with gradients greater than 30% covering an extensive area from the center towards the South (Figure 3).

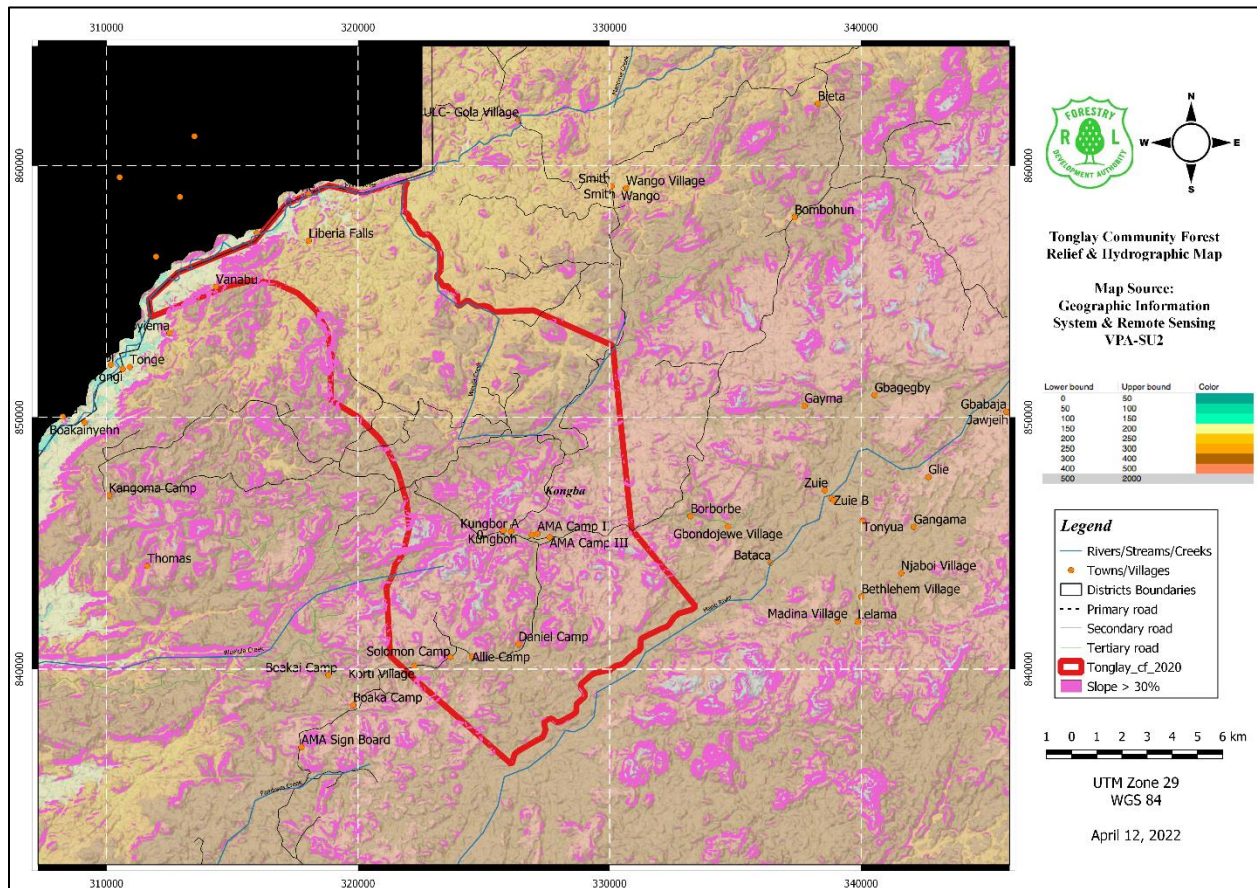


Figure 3 Relief and hydrographic map of Tonglay Community Forest

2.8 Water resources

The Community Forest is drained by a network of rivers, streams and creeks. There are also a few wetlands or swampy areas found in the CF. Two of the major rivers found in the CF are the Monro River in the North running through the CF and the Mano River in the South.

2.9 Threats to the Community Forest

Threats to the community forest include artisanal minings, poaching and unregulated subsistence farming activities.

Section 3: Future Management Objective - Forest zoning and resource management prescriptions

The total forest area of Tonglay CF accounts for 19,005.33 ha which covers 97% of the Community Forest Management Area (CFMA). The area topography is characterized by few hills, valleys, swamps and mountains with slopes greater than 30% predominant towards the North from the center. The forest has considerable stocking of economic trees with high basal area and volume estimates. There is a watercourse in the Tonglay Community Forest that need to be protected in line with the existing environmental standards.

3.1 Zoning Map

Based on the consent of the six communities constituting the Tonglay CF from the developed resource map by community members representing Kungboh, Camp Alpha, Daniel Camp, SLC Camp, Kotee Village and Tonglay. The communities unanimously resolved and zoned their CF into three management areas: Protection/conservation, Commercial and Multi-Purpose zones (Figure 4 and Table 6). The protection zone covers 2,266.08 ha (12% of the CF area) followed by commercial that covers 9,892.56 ha (50% of the CF area) whilst the Multi-Purpose zone covers 7,435.01 ha (38% of the CF area).

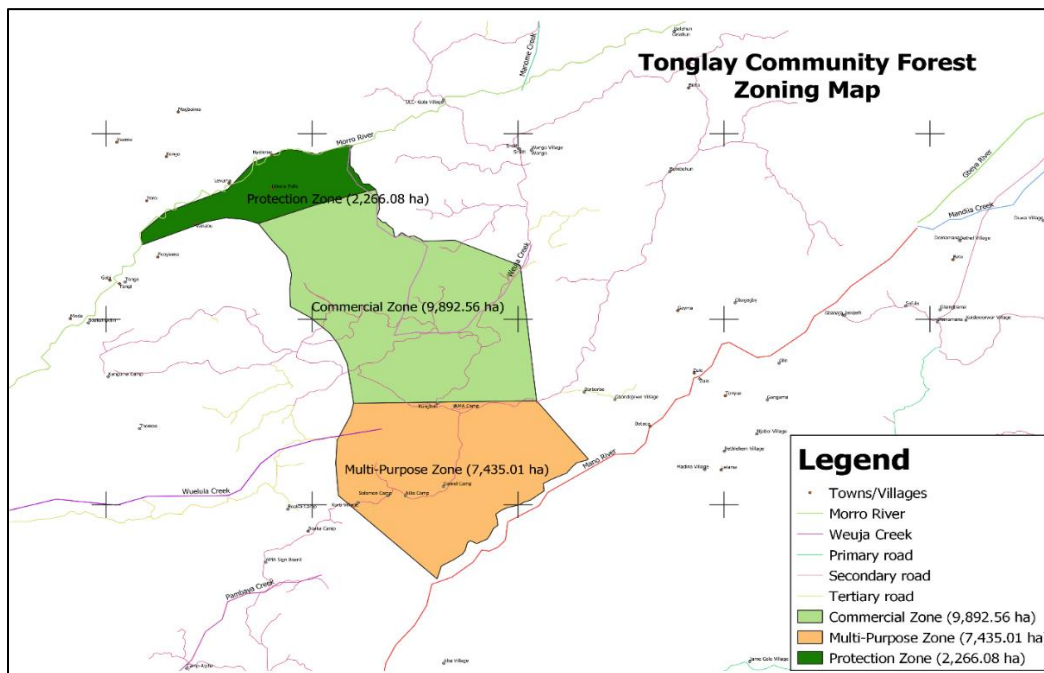


Figure 4 Zonation map for Tonglay Community Forest

Table 6 Description of management units

Management units	Total area (ha)	%	Activities
Multi Purpose	7,435.01	38	<ul style="list-style-type: none"> • Sustainable Agriculture, • chainsaw milling, • NTFPs harvesting, • Hunting excluding endangered animals, • Artisanal mining, etc.
Commercial	9,892.56	50	<ul style="list-style-type: none"> • Sustainable medium scale logging under Commercial Use Contract (CUC)
Protection/Conservation	2,266.08	12	<ul style="list-style-type: none"> • Strictly, no exploitative activity
Total	19,593.65	100	

3.2 Management objectives

The objective for the management of the Tonglay Community Forest is to optimize its management for multiple use (commercial, protection and agriculture) considering social, economical and ecological aspects:

- i. Undertake sustainable logging in a total area of 9,892.56 ha within the CF;
- ii. Undertake conservation activities in an area of 2,266.08ha to protect fragile ecosystems, biodiversity including endangered species where ecotourism potential will be optimized and revenue from carbon sequestration will be derived;
- iii. Practice multi-purpose activities such as sustainable Non-timber Forest Products (NTFP)s collection, sustainable agriculture, artisanal mining, regulated hunting, chainsaw milling etc in 7,435.01 ha by the six communities constituting the CF.

3.3 Management prescriptions

3.3.1 Commercial Zone

a. Allocation of felling rights

Commercial Timber Harvest shall be preceded by formal allocation of timber harvesting rights to a third party by the Authority (FDA) based on the genuinity of the Commercial Use Contract (CUC) entered into by the authorized forest community and third party.

b. Harvesting management plan

- i. Third party shall develop a forest management plan according to the Guidelines for Forest Management Planning, indicating the three compartments in which felling over a minimum period of 15years with the next felling to be undertaken after each 5 years.
- ii. The compartments should be divided into Annual Coupes for which Annual Operational Plans (or annual timber harvesting/logging coupes) must be prepared.

c. Timber harvesting

- Prior to felling of trees, the third party shall survey and demarcate the operational area into a minimum of 5 coupes per compartment
- Timber harvesting shall be in compliance with the Code of Forest Harvesting Practices and Guidelines for Forest Management Planning, and all other relevant laws and regulations;
- All accredited third parties shall assume the responsibility for implementing the CFMP in the area of forest resources under the agreement, and remain legally liable for breaches of relevant environmental laws and the CFMP

General rules have to be followed:

- i. Enumerate all merchantable trees up to and above the felling limit in line with FDA regulation and procedures
- ii. Only the trees above Diameter Cutting Limit are harvestable
- iii. Seed trees and endangered species should not be harvested
- iv. The third party will not harvest more than 30 m³/ha in each Block.
- v. All trees felled and stumps will be labelled and measured (full utilizable length) and data captured on appropriate data collection devices or tally books i.e. Tree Data & Log Data forms
- vi. No third-party personnel (managers, workers, visitors, or others) may carry out any forest use activities that are not an essential part of the third party's timber harvest activities, as agreed with the community. Examples of prohibited activities within the Commercial Timber Harvest Zone are any type of hunting or wildlife capture, fishing, NTFP collection, agriculture or agroforestry, mining, and any wood extraction that is not explicitly part of the commercial use contract

Details are specified in the Guidelines for Forest Management Planning.

d. Environmental considerations

- i. The third party shall develop an operational plan that guarantees Reduce Impact Logging (RIL) and minimizes any adverse environmental impacts associated with, or incidental to, its timber harvest activities.
- ii. All threatened species (flora and fauna) shall be excluded from exploitation and their habitats delineated and protected

e. Post-harvest checks and environmental audits

- i. Examine the land-use planning and the harvesting planning
- ii. Check compliance with DBH, Cutting Limits and protected species
- iii. Determine the volumes and number of harvested trees (per species), compare to the results of the Pre-harvest enumeration;
- iv. Check adherence to the Code of Forest Harvesting Practices (CFHP);
- v. Assess unexpected environmental impacts, on soils, stands, linked to chemical pollution;

- vi. Determine occurrence of illegal harvesting inside the Annual Coupe
- vii. assess extent of wildlife management
- viii. the shifting cultivation evolution.

3.3.2 Protection zone

3.3.2.1 Management

Fragile ecosystems and biodiversity shall be protected through the management of watersheds, hilly areas, endangered species and cultural sites if any following general rules:

- i. Survey and demarcate the zone
- ii. Logging shall be prohibited within the protection and conservation areas
- iii. Protect watersheds and water courses from disturbance and poisonous fishing
- iv. Maintain external boundary of CF
- v. Undertake periodic patrols within internal and external boundaries
- vi. Identify and map out all sacred areas and other cultural sites
- vii. Design and implement research activities for key indicator species (including the three endangered plant species)
- viii. Design and implement species and habitat management strategies

3.3.2.2 Carbon sequestration

Reducing Emissions from Deforestation and Forest Degradation (REDD+) is an international mechanism which has been adopted by Liberia to address the drivers of deforestation and forest degradation towards sustainable forest management and enhance carbon stocks. The CF will contribute towards the implementation of the REDD+ mechanism. REDD+ mechanisms will be adopted so as to optimize their contribution towards the mitigation of climate change effects and derive associative benefits from carbon stocks following some general rules:

- i. Conserve carbon stocks through maintaining the integrity of the CF (protection/conservation zone)
- ii. Enhance carbon sequestration through restoration of degraded areas
- iii. Reference levels will be established for the CF
- iv. Monitoring, Reporting and Verification (MRV) systems established to assess the site for future carbon credits.
- v. Equitable benefit sharing regime from REDD+ and carbon trading should be developed and implemented.

3.3.3 Multiple Use Zone

3.3.3.1 Sustainable agriculture practices

- i. Encourage the adoption of sustainable agricultural practice such as Climate Smart Agriculture
- ii. Prepare and design training modules for capacity building programmes on smart agriculture practices
- iii. Organize periodic training programmes for farmers

3.3.3.2 NTFP collection

Sustainable harvesting levels of NTFPs shall be ensured:

- i. Determine annual harvesting quotas for key NTFPs
- ii. Institute a permitting system for NTFP harvesting
- iii. Community Forest Guards to monitor NTFPs harvesting levels

3.3.3.3 Hunting

Promote sustainable hunting of key wildlife species:

- i. Determine annual hunting levels for key wildlife species
- ii. Institute a permitting system for harvesting
- iii. Community Forest Guards to monitor hunting levels for key wildlife species

Section 4 Plan Implementation

Operators who may act as third party are expected to prepare a five year plan which is further broken down into annual plans with the community/FDA to monitor its implementation. The annual work schedule should outline the implementation of forest operations and the anticipated outputs after completing each activity. Any changes to the plan on the part of the third party should be promptly communicated to the community.

4.1 Annual Programme of Work

The operational cost of all activities to be implemented under this plan should be estimated in terms of labour, equipment, materials and other consumables. The costing should be realistic and based on the Annual Programme of Work (APW). This should be presented in a tabular form (Table 7).

Table 7 Annual Programme of Work (APW)

Major operation	Unit	Target	Annual Cost (USD)			Total
			Labour	Tool, equipment	Materials	
Conservation and protection						
Boundary cleaning and patrolling						
- Forest Guards	monthly					
- Motorbikes	2.5 years					
- Rain boots	annual					
- Rain coats	annual					
- Cutlasses	annual					
Non-timber Products development						
Non-consumptive use						
- Ecotourism						
- Carbon sequestration						

* Estimates derived were based on discussions with the community

4.2 Logistical support

The community through the CFMB will procure field equipment for mensuration/inventory, survey, boundary maintenance, patrolling etc. This will include motorbikes, cutlasses GPS and other equipment that will be required for the implementation of planned activities. The list should be done according to the major operations/activities.

4.3 Revenue flow and distribution

4.3.1 Sources of revenue

Potential sources of revenue for which economic investments can be made include timber sales (stumpage and rents), NTFP permits, hunting permits.

4.3.2 Revenue predictions

The projected revenue for the plan period is indicated in Table 8 below:

Table 8 Projected Revenue

SOURCE	TOTAL USD															Total
	Year1 USD	Year2 USD	Year3 USD	Year4 USD	Year5 USD	Year6 USD	Year7 USD	Year8 USD	Year9 USD	Year10 USD	Year11 USD	Year12 USD	Year13 USD	Year14 USD	Year15 USD	
Commercial -timber harvest																
Conservation -carbon																
Ecotourism -research fee																
NTFPs																
Huntings																
TOTAL																

4.3.3 Revenue disbursement arrangements

Table 9 below shows the proportion of revenue accruing to the various beneficiaries with rights and the agreed proportions for disbursement.

Table 9 Revenue disbursements

SOURCE		TOTAL EXPECTED REVENUE	BENEFICIARIES AND % SHARE			
			FDA (GoL)	COMMUNITY	DISTRICT	COUNTY
Conservation	Carbon					
	Research fee					
Commercial -timber harvest						
NTFPs						
Huntings						
TOTAL						

4.3.4 Funding

Possible sources of funding could include:

- Retention from management fees of FDA
- Contribution from the share of revenue accruing to land owners, county and district assemblies
- Voluntary contribution from public /private institutions and individuals
- Loans
- Grants
- Private investors
- Service charges and fees
- Project/programme sources

4.4 Enforcement of standards

Chapter 4 of the Community Rights Law of 2009 outlines the roles and responsibilities of key community actors in the management of the Community Forest. The CFMB shall be responsible for enforcing standards indicated in the prescriptions including the enactment of bye-laws. Table 10 summarises the roles and responsibilities of key stakeholders

Table 80 Roles and responsibilities of key stakeholders

ORGANISATION	FUNCTIONS
FDA	Responsible for ensuring that the community is sustainably managing its forest in accordance with the CFMP, as approved
CA	The Community Assembly is the highest decision body over community forestry matters. Its decisions are guided by the constitution and bylaws of the community
EC	The Executive Committee is responsible to monitor the activities of the CFMB and provides supervision and guidance to the CFMB when the CA is not in session
CFMB	Responsible for day-to-day management of the community forest as prescribed in the CFMP, the Forest Rules, and the constitution and bylaws. Inform community members on the zoning of the forest, and any restrictions that may be placed upon their use of forest resources or access to areas within the forest. The CFMB shall design a permitting system to control the extraction of NTFPs, and hunting and fishing, to ensure that sustainability requirements are met
COMMUNITY FOREST GUARDS	Boundary Maintenance Halt any activities that are prohibited under the CFMP Seize any equipment (e.g. mosquito nets being used for fishing, illegal traps, etc.) being used for prohibited activities; Seize any timber, NTFPs, or bushmeat that has been harvested contrary to the CFMP or in contravention of the Forest Rules Immediately report any prohibited activities to the CFMB, and submit any equipment being used for prohibited activities, or forest products that have been harvested outside of the CFMP or in contravention of the Forest Rules Report regularly to the CFMB.

4.2. Monitoring and Evaluation

Monitoring and Evaluation (M&E) is a tool used to assess the performance of projects and programmes. The main goal of M&E of the implementation of the Community Forest Management Plan is to supervise and steer the implementation of the CFMA.

4.2.1 Monitoring

Monitoring is a continuous assessment of programmes based on early detailed information on the progress or delay of the ongoing assessed activities. Monitoring of the activities spelt out in the CFMP will be done depending on the type of activity either periodically, monthly, quarterly or annually. Table 11 below describes the various levels of monitoring, indicators and the institutions/agencies to be involved in the monitoring process. The following M&E Framework shall be adopted for implementation.

Table 11 Monitoring and evaluation matrix

Prescribed treatment	Activities	Indicators of achievement	MOV	Frequency	Responsible institution
To protect fragile ecosystems and biodiversity in the Tonglay Community Forest					
Protection use	Boundary maintenance & patrolling	Length of boundary cleaned/inspected	Report	Monthly	Community Forest Guards
	Logging shall be prohibited within the protection and conservation areas	No. of illegal activities	Monitoring report	Annually	FDA, EPA, CFMB
	Protect watersheds and water courses from disturbance and poisonous fishing	Number of watershed monitoring activities undertaken	Monitoring report	Annually	CFMB
	Undertake periodic patrols within internal and external boundaries	Number of patrols undertaken	Field reports	Quarterly	CFMB
	Identify and map out all sacred areas and other cultural sites	Number and distribution of cultural sites	Survey report	Once	FDA, CFMB
	FDA should design and implement research activities	Number and types of researches	Research concepts	Biannually	FDA/Partners

	for key indicator species	designed by FDA			
	Design and implement species and habitat management strategies	Number species management strategies developed and being implemented	Species action plans	Periodic	FDA/CFMB
To optimize revenue from carbon sequestration	Conserve carbon stocks through maintaining the integrity of the CF (conservation zone)	Condition of remnant natural forest	Land use map	Annually	FDA
	Enhance carbon sequestration through restoration of degraded areas	Total area of degraded areas planted with indigenous tree species	Field reports	Quarterly	FDA / CFMB
	Reference levels will be established for the CF	Status of forest within the CF	Landuse map/reports		
	Monitoring, Reporting and Verification (MRV) systems to assess the site for future carbon credits.	Monitoring system in place to assess carbon dynamics within CF	MRV reports	Annually	FDA / CFMB
	Equitable benefit sharing regime from REDD+ and carbon trading should be developed and implemented	Benefit sharing agreement signed among parties	Disbursement reports	Quarterly report	FDA / Ministry of Finance
Sustainable Agriculture	Encourage the adoption of sustainable agricultural practice such as Climate Smart Agriculture	Number of farmers engaged in sustainable agricultural activities	Survey reports	Biannually	FDA/Partners

	Prepare and design training modules for capacity building programmes on smart agricultural practices	Number of training modules developed	Training materials	biannually	FDA/partners
	Organize periodic training programmes for farmers	Number of training programmes organized for farmers	Workshop reports	Annually	FDA/CFMB/ Partners
NTFP collection: Ensure sustainable harvesting levels of NTFPs	Determine annual harvesting quotas for key NTFPs	Annual Quota in place and functional	Reports/ Records	Annually	CFMB
	Institute a permitting system for NTFP harvesting	Number of permits issued	Permits	Annually	FDA
	Forest Guards to monitor NTFPs harvesting levels	Number of field inspections undertaken	Field reports	Monthly	CFMB
Hunting	Determine annual hunting levels for key wildlife species	Harvesting quotas for key species	Inspection report	Quarterly	CFMB
	Institute a permitting system for hunting of wildlife resources	Existing permits. Number of permits issued	Permits	Monthly	FDA
	Forest Guards to monitor hunting levels for key wildlife species	Number of field inspections carried out by Forest Guards	Field reports	Monthly	CFMB
Sustainable small scale timber production	Allocation of felling rights	Felling right granted Third Party/community members	Document	Once	FDA
	Harvesting management plan	Management plan approved by FDA	Management plan	Every five years	Third Party

	Timber harvesting	The volumes and number of harvested trees (per species). DBH Cutting Limits.	Felling register	Once every year	Community Members, FDA
	Environmental considerations	Prepared operational plan Protected species	Plan	Every five years	Third Party
	Post-harvest audits	Number of audit/post-harvest checks conducted	Report	Annually	FDA

4.2.2 Evaluation

Evaluation examines the relevance, effectiveness, efficiency and impact of activities in the light of specified objectives. The evaluation of the CFMP implementation shall be conducted every five (5) years over the plan implementation period by the various stakeholders who are signatories to the agreement.

References

An Act to Establish the Community Rights Law with Respect to Forest Lands of 2009. Approved October 16, 2009. Published by Authority of the Ministry of Foreign Affairs, Monrovia, Liberia

FDA 2021 Community Forest Management Plan (CFMP) Preparation Guidelines

FDA 2019 Socio-Economic Reconnaissance Survey (SERS)

FDA 2017 Code of Forest Harvesting Practices (CFHP)


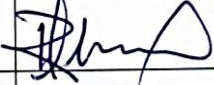
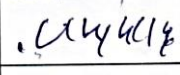
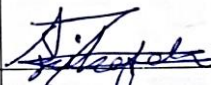
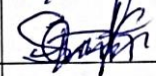



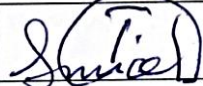
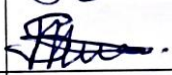
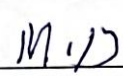

FDA 2009 Forest Management Planning Guidelines

5.0. ANNEXES

Annex 5.1 Approval by Community Assembly

We the undersigned members of the Community Assembly (CA) of the Tonglay Clan Authorized Community Forest have approved this Community Forest Management Plan as presented

Community Assembly:

No.	Name	Community	Position	Signature
1	Amos Z. Boima	Kumgbor	Chairman	
2	Richard Thomas	Kumgbor	Secretary	
3	Abu Kamara	Kumgbor	Member	
4	Alfred Jabateh	Camp Alhpa	Co-Chairman	
5	Sam Kpeah	Camp Alhpa	Member	
6	Korto Sumo	Camp Alhpa	Member	
7	Musu Zorlee	Kortee Village	Member	
8	Titus Gbelah	Kortee Village	Member	
9	Alphonso Mahn	Kortee Village	Member	
10	Saah Musa	Daniel Camp	Finance Officer	
11	Mustapha Dakoseh	Daniel Camp	Member	
12	Siah Abu	Daniel Camp	Member	

Annex 5.2. Approval document by CFMP review board

[This section will contain the signatures of each member of the CFMP Review Board and the Managing Director of the Forestry Development Authority]

Annex 5.3 The Community Forest Management Agreement

REPUBLIC OF LIBERIA)
MONTSERRADO COUNTY)

THIS COMMUNITY FOREST MANAGEMENT AGREEMENT is made and entered into this 30th day of April AD 2021, by and between the **Government of Liberia**, acting through the **Forestry Development Authority**, hereinafter referred to as the **FDA**, represented by its Managing Director Hon. C Mike Doryen., and the Communities of **Tonglay Community Forest**, hereinafter referred to as the "**Community**", represented by their **Community Forest Management Body** by and thru its Chief Officer Karimu Fofana, for the Management of **TONGLAY COMMUNITY FOREST**; hereby

WITNESSETH

WHEREAS, the Forestry Development Authority (FDA) is the government agency with legal jurisdiction over forestry matters, and the lead agency for community forestry in Liberia;

WHEREAS, the Communities of **Tonglay Community Forest**, in accordance with the Community Rights Law of 2009 with Respect to Forest Lands (CRL) and the Amended Regulation to the Community Rights Law of 2009 with Respect to Forest Lands (Amended CRL Regulation), applied to the FDA for Authorized Forest Community status, to enable them manage and/or utilize their Community Forest resources;

WHEREAS, the FDA, in accordance with its statutorily established authority to grant Authorized Forest Community status, and issue and sign Community Forest Management Agreements (CFMA), has verified that the **Tonglay Community Forest** has satisfied all technical and legal requirements to be granted Authorized Community Forest status;

WHEREAS, the Tonglay Community Forest Management Body (CFMB) represents the Authorized Forest Community in all matters related to community forestry resources, and has been granted the legal authority by the Communities of **Tonglay Community Forest** to enter into this CFMA, as established by Section 4.2 (c) of the CRL;

WHEREAS, the Communities of **Tonglay Community Forest**, represented by **Tonglay Community Forest Management Body**, and the FDA are willing to be bound by the terms set out in this CFMA;

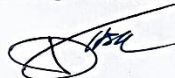
Now, THEREFORE, the FDA and the Community agree as follows:

ARTICLE 1: PURPOSE

SECTION 1.1

The **Community** and the FDA enter into this Community Forestry Management Agreement in order to:

- (a) Reiterate the rights and responsibilities of the Tonglay Authorized Forest Community to own, use and sustainably manage its forest resources, and to promote biodiversity for the direct benefit of the community, ecosystems, the nation, and the environment, as established in the CRL and Amended CRL Regulation;
- (b) Reiterate the roles and responsibilities of the FDA, as the agency with regulatory authority over the community forestry program, as established in the CRL and Amended CRL Regulation;
- (c) Pursue activities that will contribute to the improvement of the livelihoods of the members of the Tonglay Authorized Forest Community, through the management and use of forest resources, which may include informed conservation practices and/or sustainable harvesting of timber and non-timber forest products (NTFPs) for commercial purposes;



- (d) Promote public awareness of the economic, environmental, cultural and recreational values of Community Forestry, as pursued by the Tonglay Authorized Forest Community; and
- (e) Work in close collaboration with national and international organizations to promote and strengthen community forestry, by building the capacity of the Tonglay Authorized Forest Community.

SECTION 1.2

The implementation of this CFMA shall be guided by the following principles:

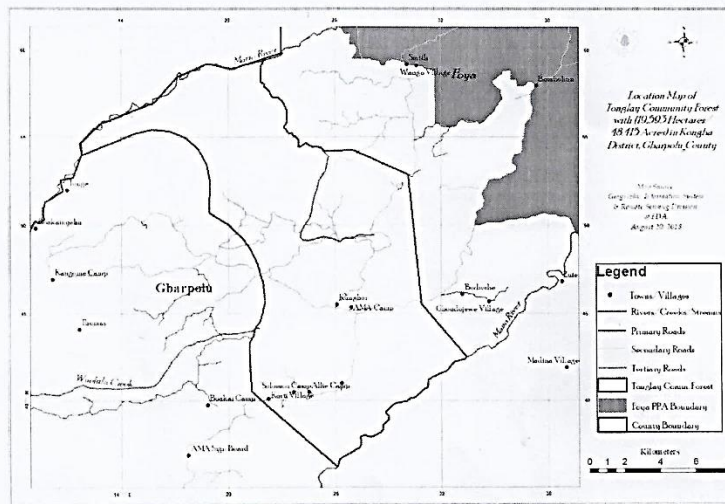
- (a) Community forest resources shall be used for the benefit of members of the Authorized Forest Community, and may include the pursuance of conservation and/or sustainable harvesting of timber and NTFPs for commercial purposes. Nothing in this CFMA precludes the Authorized Forest Community from altering how it chooses to manage its forest resources, but all legal requirements must first be met before any such change is implemented;
- (b) Community Forest resources shall be managed and used in a way that meets the needs of the present community members without compromising the ability of future generations to meet their own needs;
- (c) All members and groups in the Authorized Forest Community, irrespective of age, gender, religion or ethnicity, shall be able to participate in the management and use of Community Forest resources;
- (d) All decisions and actions relating to the management of Community Forest resources shall be explained and carried out with openness, and in a way that all members of the Authorized Forest Community will understand;
- (e) Any decision, activity or agreement affecting the status or use of Community Forest resources shall not proceed without the free, prior and informed consent of the Authorized Forest Community;
- (f) The rights of members of the Authorized Forest Community to the pursuance of activities necessary for subsistence, medicinal and cultural purposes, and to vital ecosystem services more generally, shall not be permanently alienated.

ARTICLE 2: TECHNICAL DESCRIPTION OF THE TONGLAY COMMUNITY FOREST LANDS

The Tonglay Community Forest boundaries are as follows:

Commencing at a point (326104 836213) on the Mano River A line Runs Northward along said River for 10,973 meters to a point (333421 842488) on the Mano River. Thence a line runs N 39°W for 4,023 meters to a point (330879 845551); Thence a line runs N 17°E for 6,920 meters to a point (332949 852043); Thence a line runs N 74°W for 2,896 Meters to a point (330126 852854); Thence a line runs N 18°W for 3,380 Meters to a point (326722 853406); thence a line runs N 45° W for 644 Meters to a point (326282 853869); Thence a line runs N 71°W for 322 Meters to a point (326024 853971); Thence a line runs N 88°W for 483 Meters to a point (325586 853973); Thence a line runs N 66°W for 966 Meters to a point (324754 854368) on the Mano River; Thence a line runs Northward along Said River for 22,145 Meters to a point (311734 853974) on the Mano River , Thence a line runs N 68°E for 3,379 meters to a point (314826 855218); Thence a line runs N 78°E for 966 meters to a point (315768 855429) thence a line runs S 84°E for 966 Meters to a point (316729 855330); Thence a line runs S 65°E for 966 Meters to a

point (317608 854932); Thence a line runs S 44°E for 966 Meters to a point (318316 854274); Thence a line runs S 38°E for 1,448 Meters to a point (319170 853143); Thence a line runs S 18°W for 644 meters to a point (318945 852474); Thence a line runs S 1°W for 1,770 Meters to a point (318902 850696); Thence a line runs S 55°E for 1,287 meters to a point (319959 850048); Thence a line runs S 46°E for 1,287Meters to a point (320842 849178); Thence a line runs S 30°E for 805 meters to a point (321213 848618); Thence a line runs S 25°E for 966 Meters to a point (321590 847809); Thence a line runs S 17° E for 1,287 Meters to a point (321926 846668); Thence a line runs S 7°E for 1,126 Meters to a point (322041 845615); Thence a line runs S 15°W for 1,126 Meter to a point (321784 844588); Thence a line runs S 33°W for 644 Meters to a point (321472 844134); Thence a line runs S 13°W for 322 meters to a point (321389 843774); Thence a line runs S 25°W for 644 meters to a point (321132 843250); Thence a line runs S 4°E for 1,126 Meters to a point (321275 840526); Thence a line runs S 48°E for 6,598 Meters to the point of commencement, embracing a total area of **19,593 hectares/48,415 acres** of forest land and no More



ARTICLE 3: GENERAL RIGHTS AND OBLIGATIONS

SECTION 3.1

In keeping with its statutory responsibility to regulate, protect, manage and develop forest resources, so as to sustain and optimize the potential yield of their economic, social and environmental benefits, the FDA shall:

- (a) Directly support the Tonglay Authorized Forest Community take stock of and document forest resources within the area of forest resources designated as a Community Forest, to include, where appropriate, an inventory of all merchantable timber and commercially viable NTFPs, as well as locally resident protected and endangered species and their habitat;
- (b) Communicate to the CFMB minimum standards for the development, review and approval of Community Forest Management Plans, to be reviewed every five (5) years;

(Handwritten signature)

- (c) Provide guidance to the CFMB on zoning the Community Forest, as well as the limits of the scope and scale of conservation and/or commercial exploitation within these zones, based upon the data collected about the forest resources within the Community Forest;
- (d) Suggest amendments and/or alternatives, in pursuance of the same stated goals of the Authorized Forest Community, if it is determined that the Community Forest would not be able to sustain an activity proposed in the Community Forest Management Plan(CFMP);
- (e) Assist in building the capacity of members of the Authorized Forest Community to sustainably manage their forest resources, including by securing financial and technical assistance;
- (f) Monitor and evaluate the CFMP in order to ensure that all legal and technical standards are satisfied; and
- (g) Facilitate the resolution of conflicts upon request by the Authorized Forest Community.

SECTION 3.2

The Tonglay Community Forest through the Tonglay Community Forest Management Body shall:

- (a) Ensure that Community Forest resources are managed in an environmentally sustainable manner, and maintain the forest as an ecosystem;
- (b) With the involvement of community members, and the approval of the Executive Committee of the Community Assembly, prepare and implement community forestry rules/guidelines;
- (c) With the involvement of community members, and under the guidance of the Executive Committee of the Community Assembly, develop CFMPs;
- (d) Operate in accordance with the terms and conditions of this CFMA, community forestry rules/guidelines, the CFMP, and all other relevant legislation and regulations;
- (e) With the guidance of the FDA, oversee and monitor implementation of the CFMP to ensure compliance with all relevant legal and technical requirements;
- (f) Conduct awareness raising activities in order to inform all Authorized Forest Community members about the community forestry program;
- (g) Represent the community in all matters related to community forestry in negotiations with the FDA, and with third-parties who have interests in conservation or harvesting timber and/or NTFPs for commercial purposes; and
- (h) When made aware of any forestry offences within the Community Forest, immediately inform the nearest FDA Office and, if possible, halt any ongoing illegal activities.

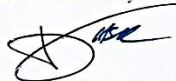
ARTICLE 4: COMPLIANCE WITH COMMUNITY FOREST MANAGEMENT AGREEMENT AND COMMUNITY FORESTRY MANAGEMENT PLAN

SECTION 4.1

All activities of the Tonglay Community Forest shall conform to both the CFMA and CFMP.

SECTION 4.2

If it is determined that members of the Tonglay Forest Community have failed or are failing to comply with the CFMA and CFMP, the FDA shall immediately provide written notice to the Tonglay Forest Community, through the CFMB, of the violation, together with instructions as to how the violation may be remedied. Any such written notice shall include warning of the sanctions



that may be applied in the absence of remedial action being taken by the Tonglay Forest Community.

SECTION 4.3

Individual members of the Forest Community who violate the terms of this CFMA and/or CFMP may be fined by the CFMB and/or referred to the appropriate authority for criminal prosecution, as per Section 1.8 of the Amended CRL Regulation.

SECTION 4.4

Individual members of the Tonglay Forest Community who violate the Amended CRL Regulation may also be subject to sanctions by the FDA and the criminal justice system, as per Section 1.8 of the Amended CRL Regulation.

SECTION 4.5

All such sanctions shall be consistent with the due process of law, as enshrined in the Constitution and statutes of Liberia. In keeping with Section 1.9 of the Amended CRL Regulation, a person or community subjected to sanctions may challenge the decision of the FDA or CFMB in a court of competent jurisdiction.

ARTICLE 5: ALTERATION OF THE COMMUNITY FOREST MANAGEMENT PLAN

SECTION 5.1

The Authorized Forest Community shall freely determine how its forest resources are managed. The Authorized Forest Community's decision as to how it manages its forest resources is represented in the CFMP, which together with the CFMA establishes a legally enforceable framework.

SECTION 5.2

The Authorized Forest Community has the right to alter its CFMP. However, all such alterations shall be made using the procedures here established, and in conformity with all other established legal and technical requirements.

SECTION 5.3

If the Authorized Forest Community decides to substantively alter the previously approved CFMP, a new plan shall be submitted to, and approved by, the FDA. A substantive alteration includes, but is not limited to:

- (a) Changes to the way an area of forest resources within the Community Forest, which has already been zoned under the CFMP, is to be used;
- (b) Changes to the size of a zoned area of forest resources within the Community Forest;
- (c) Any expansion of commercial or agricultural activities, not already envisaged under the CFMP;
- (d) Any expansion of conservation activities where it unduly restricts members of the Authorized Forest Community from using their forest resources in pursuance of sustainable livelihoods.

SECTION 5.4

The following procedure shall be followed when amending the CFMP:



- (a) The Community Assembly shall vote on whether or not it wants to consider amending the CFMP. A simple majority vote of the Community Assembly shall be required to initiate the process;
- (b) Following an affirmative vote, members of the Community Assembly shall thoroughly discuss the issue of altering the CFMP, and the proposed amendment/s, with their respective constituents;
- (c) The CFMB shall provide written notice to all towns and villages within the Authorized Forest Community about the proposed amendment/s, at least thirty (30) days prior to the Community Assembly meeting at which the final vote on amending the CFMP is to be taken;
- (d) At the Community Assembly meeting the members shall vote to accept or reject the proposed amendment to the CFMP. A two-thirds (2/3) majority vote of the Community Assembly is required before the CFMP can be amended;
- (e) Following an affirmative vote, the CFMB shall provide the FDA with written notice of its decision to amend the CFMP, after which the two parties shall work together to develop a new CFMP; and
- (f) Once the FDA verifies that the amended CFMP meets all legal and technical requirements, it shall approve the new CFMP.

ARTICLE 6: RIGHTS AND OBLIGATIONS OF THE CFMB AND FDA WITH REGARD TO COMMERCIAL HARVESTING OF TIMBER AND NON-TIMBER FOREST PRODUCTS

SECTION 6.1

As an Authorized Forest Community, the Tonglay Community Forest has the right to engage in the harvesting of timber and/or non-timber forest products (NTFPs) for commercial purposes, under regulations and guidelines issued by the FDA.

SECTION 6.2

Before any commercial harvesting can take place, the Authorized Forest Community must have met all preliminary requirements, as per the CRL and all other relevant laws and regulations. This requires that the community has organized its Community Assembly (Section 6.4(a) of the CRL); the Community Assembly has appointed the Community Forest Management Body (Section 6.4(b) of the CRL); the Community Forest Management Body has developed a Community Forest Management Plan that includes the envisaged commercial activities (Section 6.4(c) of the CRL); the Community Forest Management Plan has been approved by the Executive Committee, the Community Assembly and the FDA (Section 6.4 (d) of the CRL); and the Community Forest Management Plan is being implemented (Section 6.4(e) of the CRL.

SECTION 6.3

In keeping with the National Forestry Reform Law, the Ten Core Regulations and all other relevant laws and regulations governing Liberia's forest sector, no commercial harvesting of timber and NTFPs shall occur in a Community Forest without the Authorized Forest Community having first met the following requirements:

- (a) The inventory of merchantable tree species and NTFPs must have been independently confirmed by the FDA, in keeping with its statutory responsibility to ensure that areas of forest resources are suitable for the planned commercial harvesting, as per Section 4.5 of the NFRL, and Section 2.2 (g) and Chapter 5 of the CRL; and
- (b) The Authorized Forest Community must have conducted an Environmental Impact Assessment (EIA), as per Section 24 (2) and Section 41 of Regulation 105-07.



SECTION 6.4

Once the FDA has verified that all technical and legal requirements for the harvesting of timber and/or NTFPs for commercial purposes have been met, it shall issue a written notice to proceed to the Authorized Forest Community, through the CFMB. Only once the Authorized Forest Community has received written notice to proceed from the FDA shall the harvesting of timber and/or NTFPs for commercial purposes be permitted.

SECTION 6.5

In keeping with Section 13.5 of the NFRL, and Sections 1 through 35 of FDA Regulation 108-07, the Chain of Custody System shall apply to the harvesting of timber for commercial purposes by the Authorized Forest Community.

SECTION 6.6

As established by Section 11.6 of the Amended CRL Regulation, Authorized Forest Communities that harvest timber products for commercial purposes shall pay stumpage fees in accordance with Regulation 107-07.

SECTION 6.7

Authorized Forest Communities shall pay all relevant forest product fees, as established in Regulation 107-07, as well as all taxes and/or fees for the harvesting of NTFPs for commercial purposes, as determined by the Liberia Revenue Authority, in consultation with the FDA.

SECTION 6.8

The FDA shall monitor the harvesting of timber and/or NTFPs for commercial purposes to ensure that all environmental standards are satisfied, and that the Liberia Code of Harvesting Practices is adhered to.

SECTION 6.9

In addition to sanctions applied for failure to comply with the CFMA and CFMP, as established in Article 4 of this CFMA, the FDA may impose penalties on Authorized Forest Community members under Section 20 of the NFRL and Section 56 of the Environmental Protection Agency Act.

ARTICLE 7: RIGHTS AND OBLIGATIONS OF THE CFMB AND FDA WITH REGARD TO COMMERCIAL ARRANGEMENTS WITH THIRD-PARTIES

SECTION 7.1

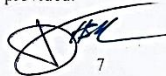
The CFMB, as the representative of the Authorized Forest Community in commercial matters, may negotiate commercial agreements with third-parties, in conformity with existing legal and technical standards.

SECTION 7.2

Before a commercial agreement between an Authorized Forest Community and a third-party can be signed, the FDA shall first review and approve it, as per Section 10.5 of the Amended CRL Regulation.

SECTION 7.3

If, following review, the FDA determines that the proposed commercial agreement does not conform to best industry practices, or does not offer fair market price for the community's forest resources, the FDA shall advise the community on how the commercial agreement needs to be amended before it can be approved. The Community Forest Management Body and Executive Committee of the Community Assembly shall hear the advice of the FDA, and attest that they have received and understood the advice provided.



SECTION 7.4

The FDA shall review, determine whether or not to approve the proposed commercial agreement and, if appropriate, provide advice on how the commercial agreement needs to be amended within fifteen (15) working days of the commercial agreement being submitted. If the FDA fails to review, officially approve and, if appropriate, provide advice on how the proposed commercial agreement needs to be amended within fifteen (15) working days of submission, the community may either provide the FDA with more time to complete the review of the proposed commercial agreement, or it may consider the requirement for review and approval of the proposed commercial agreement satisfied.

ARTICLE 8: EFFECTIVITY, LENGTH, RENEWAL AND TERMINATION

SECTION 8.1

This CFMA shall take effect upon signing by the CFMB and the FDA and shall be valid for a period of not more than 15 years. One year prior to the expiration of this CFMA, the CFMB shall submit a written request to the FDA to renew the CFMA for an additional fifteen (15) year term. The CFMA can be renewed as many times as the Authorized Forest Community would like.

SECTION 8.2

Approval to a request to renew the CFMA shall be granted only once the FDA has verified that the Authorized Forest Community is in compliance with all legal and technical requirements. Where the FDA determines that the Authorized Forest Community is not in compliance, it shall inform the Authorized Forest Community in writing of the reasons. Only once the Authorized Forest Community has addressed these issues shall the FDA approve the renewal of the CFMA.

SECTION 8.3

The FDA shall approve the request for renewal at least sixty (60) days prior to the expiration date of the CFMA. If the FDA does not provide a response to the request to renew the CFMA at least 60 days prior to its expiration date, the CFMA shall be renewed automatically for another fifteen (15) year period.

SECTION 8.4

The CFMA may be terminated prior to the expiration date based on one or more conditions as follows:

- (a) Written agreement between the CFMB, at least two-thirds of the Community Assembly members, and the FDA;
- (b) The Government of Liberia decides to exercise its power of eminent domain over a community forest, or a part thereof. Where the Government of Liberia makes such a decision, it shall comply with the constitutionally established procedure for the expropriation of private property, which, at a minimum, shall require that reasons for the expropriation are given; that there is prompt payment of just compensation; that the community is able to challenge the Government's decision to expropriate the community forest, or part thereof, or the compensation offered; and that when the Government ceases to use the community forest, or decides not to use it for the purpose for which the community forest was expropriated, rights over the community forest shall be returned to the community.

SECTION 9.1

Disputes between the Authorized Forest Community and the FDA over this CFMA, which cannot be resolved, shall be mediated by a qualified individual agreeable to both parties. Both parties have the right to retain legal counsel throughout this process.

SECTION 9.2

Where mediation fails to resolve the dispute, the parties shall submit to arbitration, under the procedures established in the Arbitration Laws of Liberia, as found in Chapter 64 of the Civil Procedure Law. Both parties have the right to retain legal counsel throughout this process.

SECTION 9.3

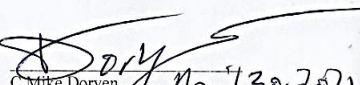
Alternatively, the Authorized Forest Community or FDA may forego arbitration in favor of review by a court of competent jurisdiction.

IN WITNESS WHEREOF, WE HAVE HEREUNTO AFFIXED OUR SIGNATURES ON THE DAY AND DATE FIRST MENTIONED ABOVE

For: The Forestry Development Authority

WITNESS

By:


C Mike Doryen
Managing Director,
Forestry Development Authority

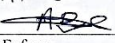
April 30, 2021

For: The TONGLAY AUTHORIZED FOREST COMMUNITY



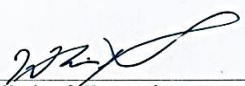
WITNESS

By:


Karimu Fofana
Chief Officer,
Tonglay CFMB

April 30 - 2021

Attested:



Harrison S. Karnwea Sr,
Chairperson, Board of Directors
Forestry Development Authority

Annex 5.4 Constitution and Bylaws

TONGLAY CLAN COMMUNITY FOREST



BY-LAWS & CONSTITUTION

CONSTITUTION

TONGLAY CLAN COMMUNITY FOREST CONSTITUTION

We the member of **Tonglay Clan Authorized Community Forest** of Gbarpolu County Republic of Liberia do here by establish this constitution for the governance of our community we, as an authorized Forest Community with the goal of sustainably managing our forest while benefiting from its resources hereby established in this constitution the organizational structure of our governance bodies and the power and the responsibilities of those bodies as require by Chapter 4, Section 4.1 (j) of the Community Rights Law of 2009 with Respect to Forest Lands (CRL).

Article I – Name

The Name of our organization shall be the Tonglay Clan Authorized Community Forest, hereafter referred to as the Tonglay Clan Authorized Forest Community for short “**TCCF**”

Article II – Objectives

The objectives of the Tonglay Clan Authorized Forest Community are as follows:

- (a) To support biodiversity and promote the sustainable use of the natural resources for the benefit of the Authorized Forest Community, the nation, and the environment;
- (b) To create public awareness of the economic, sustainable, environmental, cultural and recreational value of the resources of the Tonglay Clan Authorized Community Forest, through information campaigns, to include meetings, workshops and the distribution of educational documents;

- (c) To manage the Tonglay Clan Authorized Community Forest resources in a way that improves the well-being of all community members;
- (d) To work in close collaboration with national and international forestry organizations to build the capacity of all members of the Authorized Forest Community;
- (e) To solicit financial, technical, and material assistance from national and international organizations in order to ensure sustainable and effective management of forest resources;
- (f) To engage in any other activity that will contribute to the improvement of the livelihood of the Tonglay Clan Authorized Community through the sustainable management of forest resources.

Article III – Motto and Logo

Section 1: *Motto*

The Motto of the Authorized Forest Community is: *Forest Brings Development*

Section 2: *Logo*



The Logo of the Authorized Forest Community shall be/depict: **Tree, Diamond and Elephant**

Article IV – Technical Description of Community Forest Lands

The Tonglay Clan Community Forest

Article V – Rights and Responsibilities of the Authorized Forest Community

Section 1: *Rights*

Within the framework of the Community Rights Law of Liberia of 2009, the Authorized Forest Community affirms its right to:

- (a) Manage and develop its community forest resources under regulations issued by the FDA;
- (b) Pursue conservation programs independently or with the assistance of third-parties, to safeguard the sustainable livelihoods of Authorized Forest Community members;
- (c) Negotiate and enter into commercial contracts to sustainably harvest timber and non-timber products in its Community Forest, in order to benefit from revenues generated.

Section 2: *Responsibilities*

Rights carry with them responsibilities. Accordingly, the Authorized Forest Community affirms its responsibility to:

- (a) Manage its forest resources in a sustainable manner under regulations issued by the FDA;
- (b) Ensure full participation of Authorized Forest Community members in decisions over forest resources;
- (c) Ensure that revenues from forest resources are used for the benefit of all Authorized Forest Community members; and
- (d) Report to the FDA and other relevant institutions (National Union of Community Forest Management Bodies – **NUCFMB**, Civil Society

Organizations - CSO,) on the effective, efficient and sustainable management of its forest resources.

Article VI – Community Assembly

Section 1: *Establishment*

In compliance with the Community Rights Law of 2009, this Constitution hereby establishes the Tonglay Clan Authorized Forest Community Assembly to provide oversight on all Authorized Forest Community activities. The Community Assembly shall be the supreme decision-making body of the Authorized Forest Community.

Section 2: *Composition of the Assembly*

Section 2A: Membership.

Voting members of the Community Assembly shall be made up of representatives from towns and independent villages (villages that are not sub-units of towns), which are part of the Authorized Forest Community.

Section 2B: Town and Village Representatives

Each town and village will select three (3) members to represent their interests at all Community Assembly meetings.

Section 2C: Tenure of Community Assembly Members

Community Assembly members shall serve five (5) year terms, for a maximum number of two (2) terms.

Section 2D: Representatives of the National Legislature

Two (2) members of the Gbarpolu County Legislative Caucus shall be selected by members of the caucus to represent it on the Tonglay Clan Community Assembly. One such member shall be the representative of the constituency in which the Tonglay Authorized Community Forest is located. Members of the National Legislature shall have **no voting rights**, but may **observe and provide advice**.

Section 3: Leadership of the Assembly

The leadership of the Community Assembly shall be made up of the two (2) members of the National Legislature, described in Section 2D of Article VI and four (4) officers elected from the membership of the Community Assembly: a Chairperson, Vice-Chairperson, Secretary, and Treasurer. Together they will be known as the **Executive Committee**.

Section 4: Subsidiary Bodies

The Community Assembly may appoint other committees, permanent or temporary or recognize the existence of existing committees as it may deem fit. However, in all such instances, the Community Assembly shall ensure that functions, responsibilities and powers of the committees do not overlap or conflict.

Section 5: Powers and Functions

The powers and functions of the Community Assembly shall be to:

- (a) Meet at least twice a year to discuss and take decisions on community forestry matters;

- (b) Elect officers of the Community Assembly to the Executive Committee;
- (c) Receive, review and adopt reports submitted by the Executive Committee of the Community Assembly and other subordinate committees;
- (d) Appoint members to the Community Forest Management Body;
- (e) Receive, review and adopt reports of the Community Forest Management Body;
- (f) Approve Community Forest Management Plans and budgets drafted by the Community Forest Management Body;
- (g) Ensure sustainable management of community forest resources; and
- (h) Ensure that incomes from community forest resources contribute to the development of the community and the well-being of community members, according to the vision of the Community Assembly.

Section 6: *Headquarters of the Assembly*

The Community Assembly shall be headquartered at **Kumgbor Town**, Tonglay Clan, Jawajeh Chiefdom, Kongba District, Gbarpolu County.

Section 7: *Meetings*

The Community Assembly shall meet at least twice a year to consult and take decisions on Authorized Forest Community matters, and how resources generated from the Community Forest are to be allocated. All Community Assembly meetings will be held within the territory of the Authorized Forest Community at a place chosen by consensus at the previous Community Assembly meeting.

Article VII – The Executive Committee

Section 1: *Composition of the Executive Committee*

Section 1A: Administration

The core membership of the Executive Committee shall be made up of four (4) officers elected from the Full Membership of the Community Assembly: a Chairperson, Vice Chairperson, Secretary, and Treasurer. The Executive Committee is responsible for the administration of the Community Assembly. **Each officer retains full voting rights in the Community Assembly.**

Section 1B: Representatives of the National Legislature

The Executive Committee shall include the two (2) members of the National Legislature, described in Article VI, Section 2D. These two members of the National Legislature shall **not be entitled to vote** in Community Assembly meetings, but may **observe and provide advice.**

Section 1C: Co-Opted Members

The Community Assembly may appoint additional members with special skills, such as accountants, foresters, and lawyers, to the Executive Committee, if it decides that these persons will enhance community forestry management. Co-opted members shall not be entitled to vote in Community Assembly meetings, but may observe and provide advice.

Section 2: Election and Tenure of Executive Committee Officers

Members of the Community Assembly shall elect the officers of the Executive Committee by secret ballot, for five (5) year terms. No officer of the Executive Committee may serve for more than two (2) terms.

Section 3: Powers and Functions

Between sittings of the Community Assembly, the Executive Committee of the Community Assembly shall supervise the work of the CFMB. The

oversight responsibilities of the Executive Committee over the CFMB shall be as follows:

- (a) Making policies and providing strategic direction to the Community Forest Management Body;
- (b) Approving Community Forest Management Plans and budgets drafted by the Community Forest Management Body;
- (c) Ensuring that community forestry funds are managed transparently and accountably;
- (d) Receive and review quarterly reports submitted by the Community Forest Management Body on the management of the community forest;
- (e) Account to the Community Assembly on the performance of the Community Forest Management Body; and
- (f) Undertake all other functions usually performed by Executive Committees of this nature

Section 4: Meetings and Reporting

The Executive Committee shall meet at least **once every three months**, or as often as is required. The Executive Committee shall report on all of its activities at Regular meetings of the Community Assembly

Article VIII – Community Forest Management Body - CFMB

Section 1: Establishment of a Community Forestry Management Body

In compliance with the Community Rights Law of 2009, this Constitution hereby establishes the Tonglay Clan Authorized Community Forest Management Body-**TCCFMB**, to oversee the day-to-day management of the Authorized Forest Community's forest resources.

Section 2: *Composition of the CFMB*

The CFMB shall be made up of five (5) members, at least one of which shall be a woman. These shall be a Chief Officer, Secretary, Treasurer, and two (2) others to be determined by the Community Assembly. Unless there are no suitably qualified candidates, all members of the CFMB shall be residents of the Forest Community. Where no suitably qualified candidates can be found, the Executive Committee may authorize non-residents to serve on the CFMB. **None of the five (5) members of the CFMB shall be a member of the Community Assembly, a government official, or a member of the National Legislature.**

Section 3: *Selection, Appointment, and Tenure of Members of the CFMB*

Members of the Community Assembly shall select and appoint CFMB members for five (5) year terms. No CFMB member shall serve for more than two (2) terms.

Section 4: *Election of Leadership of the CFMB*

From among the five officers of the Community Forest Management Body, the Community Assembly shall elect through secret ballot, and by simple majority, the Chief Officer, the Secretary, and the Treasurer.

Section 5: *Powers and Functions of the CFMB*

The Community Forest Management Body shall have the following powers and functions:

- (a) Implement policies and decisions of the Community Assembly;
- (b) Develop and implement CFMPs;
- (c) Prepare and submit an annual work plan and budget to the Community Assembly for approval;
- (d) Implement the approved budget and manage the Community Forest Fund;
- (e) Manage the day-to-day activities of the Authorized Forest Community;
- (f) Ensure compliance with all relevant legal requirements relating to the community forestry program;
- (g) Negotiate and oversee commercial arrangements with third parties;
- (h) Represent the Authorized Forest Community in all forestry matters;
- (i) Periodically report to the Executive Committee and Community Assembly.

Section 6: *Meetings and Reporting*

Members of the CFMB shall meet as often as is required in order to perform their duties. Whenever the Executive Committee and Community Assembly meet, the CFMB shall report on all of its activities. At meetings of the Community Assembly, the CFMB shall report directly to the full Community Assembly.

Article IX – Management of Community Forest Funds

Section 1: *Establishment of Accounts*

The CFMB shall establish and administer two separate bank accounts, authorized by the Executive Committee: one for the **operations** of the community **forestry management program** and the other for the implementation of community social development projects.

Section 2: *Use of Community Forest Funds*

Funds generated from community forest resources shall be shared between forestry management activities and community development activities, as determined by the Community Assembly on an annual basis.

Section 3: *Financial Management*

The CFMB shall ensure that community forest funds are managed in an accountable and transparent manner, under clear provisions for budgeting, expenditure approvals, and annual external audits. As part of its responsibility, the CFMB shall keep an accurate financial record of all financial transactions and shall prepare from these records financial statements in both standard and simplified versions, compatible with the accounting system being used by the Liberia Revenue Authority, for presentation to the Community Assembly.

Article X – Amendment

The Community Assembly may amend this Constitution at any of its regular meetings, provided the proposed amendment has been circulated one meeting prior to the meeting at which the amendment is to be voted upon. Amendment shall be by a vote of two-thirds (2/3) of the Community Assembly membership.

Article XI – Conflicts with other Laws

The Constitution of Liberia, the Community Rights Law of 2009, and the National Forest Reform Law of 2006, in this order, take precedence over the Tonglay Clan Authorized Forest Community's Constitution.

BY-LAWS

TONGLAY AUTHORIZED COMMUNITY FOREST BY-LAWS

These are the rules and regulations enacted by the Community Assembly, which provide a framework for the operation and management of the Authorized Forest Community, as required by Chapter 4, Section 4.1 (j) of the Community Rights Law of 2009 with Respect to Forest Lands (CRL).

Article I – The Community Assembly: *Membership*

Section 1: *Membership*

Members of the Community Assembly shall be representatives of the towns and independent villages within and nearby the area of forest resources that makes up the Community Forest.

Section 2: *Rights of Membership*

All members of the Community Assembly shall have equal rights to participation and decision-making regarding the work of the Community Assembly. This right shall include, but not be limited to, the right to vote, hold office, attend meetings, participate in discussions and participate in decision-making.

Section 3: *Election of Community Assembly Members*

Community Assembly members shall be elected by their various constituencies. The elections shall be by secret ballots. Elections shall be by a simple majority of attendees of a **properly publicized** and scheduled general meeting of the community or constituency for the purpose of selecting representatives to the Community Assembly

Section 4: *Tenure of Community Assembly Members*

Members of the Community Assembly will be elected for five (5) year terms, for a maximum number of two (2) terms.

Section 5: *Responsibilities of Community Assembly Members*

As representatives of the individual towns and villages within or nearby the Community Forest, members of the Community Assembly have a responsibility to:

- (a) Solicit and listen to the concerns and demands of their constituents, with regard to the management of Community Forest resources;
- (b) Faithfully advocate for the interests and expressed wishes of their constituents, with regard to Community Forest resources; and
- (c) Accurately report to their constituents on the proceedings of the Community Assembly, upcoming issues, decisions taken, and any other relevant matter related to the management of Community Forest resources.

Section 6: *Removal of Community Assembly Members by Electing Community - Vote of No Confidence*

Members of the Community Assembly who are found to be incapable of effectively performing the duties of their office may be removed by a vote of two-thirds (2/3) of attendant community members, at a properly publicized and scheduled general meeting of the community.

Prior to such a vote, the member of the Community Assembly shall be informed in writing as to why a vote of no confidence is being taken, and given an opportunity to respond to any charges before the vote is held.

Article II – The Community Assembly: *Meetings*

Section 1: *Regular Community Assembly Meetings*

Regular Community Assembly meetings shall be held at least twice a year. At the end of each Regular Community Assembly meeting members shall agree upon the date, location and time of their next meeting

Section 2: *Special Community Assembly Meetings*

The Executive Committee shall call a Special Community Assembly meeting, following submission of a written request by at least one-tenth of the Community Assembly members. The Executive Committee may also call a Special Community Assembly meeting in order to address critical issues arising from the execution of its forest management responsibilities, which requires the urgent attention of the membership. At Special Community Assembly meetings, only those matters stated on the agenda, as included in the notice of the meeting, may be addressed by the membership.

Section 3: *Date, Time and Location of Special Assembly Meetings*

The Executive Committee shall determine when and where Special Community Assembly meetings are to be held. All Special Community Assembly meetings shall be at a designated location within the Forest

Community, at a convenient date and time, taking into consideration the responsibilities and livelihoods of members.

Section 4: *Notice of Regular and Special Community Assembly Meetings*

Notice of every Regular Community Assembly meeting shall be given to all members by way of announcement through all common and available media at least thirty (30) days prior to the meeting, and shall include the time and location of the meeting, as well as a proposed agenda. Notice of every Special Community Assembly meeting shall be given to all members by way of announcement through all common and available media at least ten (10) days prior to the meeting, and shall include the time and location of the meeting, as well as a proposed agenda.

Section 5: *Minutes of Community Assembly Meetings*

The Secretary of the Executive Committee shall record the minutes of all Community Assembly meetings. At the beginning of each Community Assembly meeting, the minutes of the previous meeting shall be reviewed and approved by Community Assembly members.

Section 6: *Quorum*

A quorum for Community Assembly meetings shall be **eight (8) members** which is two-thirds of the twelve (12) members of the Community Assembly.

Section 7: *Decision-Making*

Where consensus cannot be achieved, decisions at Community Assembly meetings shall be made by a simple majority vote, unless specified otherwise

Section 8: *Attendance and Punctuality*

Community Assembly members are expected to attend and be on time for all properly publicized and scheduled meetings (Regular and Special).

If a member or official of the Community Assembly is absent, and unable to provide a reasonable explanation, the following action will be considered;

- (a) Being absent for the first time – verbal warning
- (b) Absent for two consecutive meetings – warning letter
- (c) Absent for three consecutive meetings – CA membership will be suspended, pending the decision of the community who the member represents.

Section 9: *Comportment during Community Assembly Meetings*

Community Assembly members shall treat each other with courtesy and respect, in keeping with their role as community representatives.

Article III - The Executive Committee: *Officers of the Community Assembly*

Section 1: *Qualifications to Serve on the Executive Committee*

Officers of the Executive Committee must possess the requisite skills, capacity, and experience to effectively perform their duties, be in good social and moral standing, and be able to speak and write simple English.

Section 2: *Elections*

Officers of the Executive Committee shall be elected by Community Assembly members, through secret ballot, at a Regular Community Assembly meeting.

Section 3: *Tenure*

Officers of the Executive Committee shall be elected for five (5) year terms, for a maximum number of two (2) terms.

Section 4: *Removal of Executive Committee Officers - Vote of No Confidence*

Members of the Executive Committee of the Community Assembly who are determined to be incapable of effectively performing the duties of their office may be removed by a two-thirds (2/3) majority vote (**8 votes**) of the Community Assembly, at a properly constituted **Special Meeting** of the Community Assembly. Prior to such a vote, the member of the Executive Committee shall be given an opportunity to respond to any charges that they are unable to effectively perform their duties.

Section 5: *Death, Incapacitation, Relocation or Resignation of an Officer of the Executive Committee*

In case of the death, incapacitation, relocation or resignation of an officer of the Executive Committee, the CA shall conduct a by-election within 60 days to fill the position.

Article IV – The Community Forest Management Body

Section 1: *Qualifications to Serve on the Community Forest Management Body*

Members of the CFMB must possess the requisite skills, capacity, and experience to effectively perform their duties and must satisfy the **eligibility criteria** set by the Community Assembly.

Section 2: *Procedures for the Selection and Appointment of the Community Forest Management Body*

The five (5) members of the CFMB shall be selected and appointed using the following procedure:

- (a) Advertisements for the positions on the CFMB will be publicized using the means usually employed to inform community members of important issues;
- (b) Interested persons shall submit their applications to the Chairperson of the Executive Committee;
- (c) The Executive Committee shall review applications, conduct interviews, and select and appoint the five best-qualified candidates for onward submission to the Community Assembly.

Section 3: *Election of Chief Officer, Secretary and Treasurer*

From the five (5) members selected to serve on the CFMB, the Community Assembly shall elect, through secret ballot, and by simple majority, the Chief Officer, Secretary, and Treasurer

Section 4: *Tenure*

Members of the CFMB shall serve for a period of five (5) years. No member of the CFMB may serve for more than two terms. To ensure institutional knowledge is developed and retained, the terms of the members of the first body shall be staggered as follows:

- Chief Officer – 5 years
- Secretary – 4 years
- Treasurer – 3 years
- Other two – 2 years

Section 5: *Remuneration of CFMB Officers*

The CFMB members will compensated with 8% of each deposit made into the Community Forest's bank accounts.

Section 6: *Removal of CFMB Officials – Vote of No Confidence*

Members of the CFMB who are found to be incapable of effectively performing the duties of their office may be removed by a two-thirds majority vote of the Community Assembly, at a properly constituted Special meeting of the Community Assembly. Prior to such a vote, the member of the CFMB shall be given an opportunity to respond to any charges that they are unable to effectively perform their duties. In the

event a member's employment with the CFMB is terminated, all relevant Liberian labor laws shall be followed.

Section 7: Removal of CFMB Officials – For Cause

Section 7A:

Investigation: Where there are credible allegations that a member of the CFMB has mismanaged community forest resources, engaged in misconduct, or misappropriated community forest funds, the Executive Committee, with the technical support of the FDA, shall conduct an investigation and prepare a comprehensive report. **During the investigation, the CFMB member shall be temporarily suspended.**

Section 7B:

Removal from Office: If after investigation and/or financial audit it is determined that the CFMB member has mismanaged community forest resources, engaged in misconduct, or misappropriated community forest funds, the CFMB member's employment shall be terminated. All relevant Liberian labor laws shall be followed.

Section 7C:

Sanctions: In addition to being removed from office, the CFMB member shall be permanently banned from serving in any of the bodies tasked with community forest governance, and may be subject to fines under the Authorized Forest Community by-laws, as per Chapter 1, Section 8 of the Regulation to the Community Rights Law of 2009 with Respect to Forest Lands, as Amended. The CFMB member may also be subject to criminal prosecution under the Liberian penal code, following referral by the Executive Committee of the offence/s to the FDA.

Section 7D:

Due Process: Before the investigation is concluded the CFMB member shall be given an opportunity to respond to all allegations, in keeping with the due process of law.

Section 7E:

Appeal: As per Chapter 1, Section 9 of the Regulation to the Community Rights Law of 2009 with Respect to Forest Lands, as Amended, a CFMB member who has been found guilty of an offence and subjected to punitive measures may appeal to a court of competent jurisdiction.

Article V – Management of Community Forest Funds

Section 1: *Banking*

Our two bank accounts will be opened in Liberia Bank for Development and Investment (LBDI) and GN Bank Liberia; LBDI for Operational funds while GN bank Liberia for Social Development Funds.

Section 2: *Signatories to Community Forest Bank Accounts*

There shall be three (3) authorized signatories for each of the community's bank accounts: The **Chief Officer** as the first authorized signatory; the **Treasurer** as the second authorized signatory; and **another community member** as the third authorized signatory. The Executive Committee shall approve the third signatory. All withdrawals from an account of the community shall require at least two signatories.

Section 3: Disbursement of Forest Community Funds

All disbursements shall be made as provided by the approved budget. The Community Forest Management Body shall authorize specific expenditures, through its Chief Officer and Treasurer. The Executive Committee's approval is required for withdrawal of an amount not more than **\$500.00 USD (Five Hundred United States Dollars)** or its Liberian Dollars equivalent. The petty cash level shall be set by the Community Forest Management Body and petty cash shall be disbursed only upon the authority of the Chief Officer and Treasurer.

Section 3A: Petty Cash Threshold

The petty cash threshold of the Tonglay Clan Authorized Forest Community shall be **USD\$ 200.00** or its equivalence in Liberian Dollars to last for a period of 60days and shall be kept Treasurer.

Section 4: Financial Reporting

The CFMB shall make quarterly financial reports to the Executive Committee and the FDA. The report shall explain sources and uses of funds within each given quarter. They shall also present balances in the various community accounts

Section 5: Financial audits

The Executive Committee shall appoint either an accounting firm or a qualified accountant to audit the accounts of the community forestry program on an annual basis. The cost of the annual audit shall be included in the annual community forestry budget. The report of the audit shall be submitted to the Executive Committee for review and appropriate action

Article V – Authorized Forest Community Members

Section 1: *Obligations of Authorized Forest Community Members*

In addition to being bound by all national laws and regulations, Authorized Forest Community members are legally bound by the **TONGLAY CLAN** Authorized Forest Community Constitution and By-Laws

Section 2: *Offences*

Under the current by-laws, a member of the **TONGLAY CLAN** Authorized Forest Community commits an offence when they:

- (a) Illegally enter the **TONGLAY CLAN** Community Forest;
- (b) Obstruct the monitoring of a community forestry program either by the CFMB or the FDA;
- (c) Damage or destroy boundary marks, signboards and/or other symbols of identification of the **TONGLAY CLAN AUTHORIZED** community forest;
- (d) Act to prohibit or impede the implementation of the CFMP, or a provision thereof; or
- (e) Willingly damage the forest resources of the **Tonglay Clan** Authorized Forest Community

Section 3: *Sanction of Authorized Forest Community Members*

Section 3A:

Investigation and Report- All allegations that a member of the Authorized Community Forest has committed an offence shall be submitted to the CFMB in writing. The CFMB shall investigate all

credible allegations and compile a written report, which it will submit to the Executive Committee for consideration.

Section 3B:

Notice of Hearing - The Executive Committee shall give reasonable notice of the upcoming hearing to the member of the Authorized Forest Community, alleged to have committed an offence. Notice shall be provided in writing and include the details of the alleged offence, together with the location, date and time of the hearing.

Section 3C:

Hearing

The Executive Committee shall provide the member of the Authorized Forest Community alleged to have committed an offence with an opportunity to review the report submitted by the CFMB, present any relevant evidence in their defense, call witnesses, and respond to all of the allegations, in accordance with the due process of law.

Section 3D:

Sanctions: A Forest Community member found to be guilty of an offence may be subject to fines under these by-laws, as per Chapter 7, Section 7.1 of the Community Rights Law of 2009 with Respect to Forest Lands, and Chapter 1, Section 8 of the Regulation to the Community Rights Law of 2009 with Respect to Forest Lands, as Amended.

Section: 3E:

Appeal to the Community Assembly. A member of the Authorized Forest Community found guilty of an offence by the Executive Committee shall have the right to appeal the decision at the next Community Assembly meeting. The member of the Authorized Forest

Community shall provide written notice to the Executive Committee, through the CFMB, that they intend to appeal. The Community Assembly may, by a three-quarters majority vote, adjust or reverse the decision.

Section 3F:

Appeal to a Court of Law. As per Chapter 1, Section 9 of the Regulation to the Community Rights Law of 2009 with Respect to Forest Lands, as Amended, all members of the Authorized Forest Community have the right to appeal to a court of competent jurisdiction.

Article VI- Amendment

The Community Assembly may amend these by-laws at any of its regular meetings, provided the proposed amendment has been circulated one meeting prior to the meeting at which the amendment is to be voted upon. Amendment shall be by a vote of two-thirds (2/3) of the Community Assembly membership.

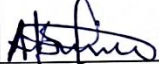
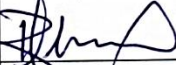
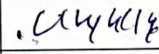

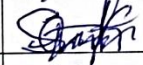
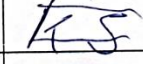

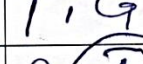
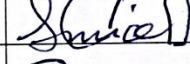

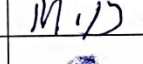

Article VII - Conflicts with other Laws

The Constitution of Liberia, the Community Rights Law of 2009, and the National Forest Reform Law of 2006, in this order, take precedence over the **TONGLAY CLAN AUTHORIZED Forest Community By-Laws.**

RESOLUTION

We the undersigned members of the community Assembly of Tonglay Clan Authorized Community Forest have adopted this legal document as our by-laws and constitution:

Community Assembly:

No.	Name	Community	Position	Signature
1	Amos Z. Boima	Kumgbor	Chairman	
2	Richard Thomas	Kumgbor	Secretary	
3	Abu Kamara	Kumgbor	Member	
4	Alfred Jabateh	Camp Alhpa	Co-Chairman	
5	Sam Kpeah	Camp Alhpa	Member	
6	Korto Sumo	Camp Alhpa	Member	
7	Musu Zorlee	Kortee Village	Member	
8	Titus Gbelah	Kortee Village	Member	
9	Alphonso Mahn	Kortee Village	Member	
10	Saah Musa	Daniel Camp	Finance Officer	
11	Mustapha Dakoseh	Daniel Camp	Member	
12	Siah Abu	Daniel Camp	Member	

No.	Name	Community	Position	Signature
1	Karimu Fofanna	Camp Alpha	Chief Officer	
2	J. Alex Musa	Kumgbor	Secretary	
3	Famatta Tamba	Kumgbor	Treasurer	
4	Alhaji Tejan Kaba	Kumgbor	Member	
5	Abu Kamara	Kumgbor	Member	

Annex 5.5 Forest Rules

[This section will contain the community forest rules once developed by the community]

Annex 5.6 List of the Community Assembly Members, including members of the Executive Committee

No	Name	Community	Position
1	Amos Z. Boima	Kungbor	EC Chairman
2	Richard Thomas	kungbor	EC Secretary
3	Abu Kamara	Kungbor	Member
4	Alfred Jabateh	Camp Alpha	EC Co Chaiman
5	Sam Kpeah	Camp Alpha	Member
6	Korto Sumo	Camp Alpha	Member
7	Musu Zorlee	Kortee Village	Member
8	Titus Gbelah	Kortee Village	Member
9	Alphonso Mahn	Kortee Village	Member
10	Saah Musa	Daniel Camp	EC Financial Officer
11	Mustapha Dakoseh	Daniel Camp	Member
12	Siah Abu	Daniel Camp	Member

Annex 5.7 Flora and Fauna

Assessed Species list for plants in the Tonglay Community Forest

No	Species	FAMILY	IUCN Red List Category	Abundance
1	<i>Afzelia bella</i>	Fabaceae	Least Concern	1
2	<i>Albizia adianthifolia</i>	Fabaceae	Least Concern	3
3	<i>Albizia zygia</i>	Fabaceae	Least Concern	18
4	<i>Alstonia boonei</i>	Apocynaceae	Least Concern	1
5	<i>Amphimas pterocarpoides</i>	Fabaceae	Least Concern	12
6	<i>Androsiphonia adenostegia</i>	Passifloraceae	Least Concern	5
7	<i>Annickia polycarpa</i>	Annonaceae	Least Concern	4
8	<i>Anopyxis klaineana</i>	Rhizophoraceae	Vulnerable	3
9	<i>Anthocleista vogelii</i>	Gentianaceae	Least Concern	2
10	<i>Anthonotha fragrans</i>	Fabaceae	Least Concern	23
11	<i>Anthonotha macrophylla</i>	Fabaceae	Least Concern	7
12	<i>Antiaris toxicaria</i>	Moraceae	Least Concern	1
13	<i>Antrocaryon micraster</i>	Anacardiaceae	Vulnerable	2
14	<i>Aubrevillea platycarpa</i>	Fabaceae	Not Evaluated	2
15	<i>Baphia pubescens</i>	Fabaceae	Least Concern	1
16	<i>Beilschmiedia mannii</i>	Lauraceae	Least Concern	6
17	<i>Berlinia confusa</i>	Fabaceae	Least Concern	2
18	<i>Berlinia grandiflora</i>	Fabaceae	Least Concern	1
19	<i>Bertiera spicata</i>	Rubiaceae	Least Concern	1
20	<i>Bombax buonopozense</i>	Malvaceae	Least Concern	4
21	<i>Bridelia grandis</i>	Phyllanthaceae	Least Concern	5
22	<i>Bussea occidentalis</i>	Fabaceae	Least Concern	25
23	<i>Caloncoba brevipes</i>	Achariaceae	Least Concern	3
24	<i>Caloncoba echinata</i>	Achariaceae	Least Concern	2
25	<i>Calpocalyx aubrevillei</i>	Fabaceae	Least Concern	28

26	<i>Calpocalyx brevibracteatus</i>	Fabaceae	Least Concern	5
27	<i>Campylospermum reticulatum</i>	Ochnaceae	Not Evaluated	4
28	<i>Carapa procera</i>	Meliaceae	Least Concern	75
29	<i>Celtis adolfi-friderici</i>	Cannabaceae	Least Concern	6
30	<i>Chidlowia sanguinea</i>	Fabaceae	Least Concern	4
31	<i>Chrysophyllum africanum</i>	Sapotaceae	Least Concern	5
32	<i>Chrysophyllum albidum</i>	Sapotaceae	Near Threatened	1
33	<i>Chrysophyllum perpulchrum</i>	Sapotaceae	Least Concern	3
34	<i>Chrysophyllum subnudum</i>	Sapotaceae	Least Concern	4
35	<i>Cleistopholis patens</i>	Annonaceae	Least Concern	2
36	<i>Cola buntingii</i>	Malvaceae	Near Threatened	1
37	<i>Cola lateritia</i>	Malvaceae	Least Concern	1
38	<i>Coula edulis</i>	Olacaceae	Least Concern	2
39	<i>Cryptosepalum tetraphyllum</i>	Fabaceae	Vulnerable	3
40	<i>Dacryodes klaineana</i>	Burseraceae	Least Concern	15
41	<i>Daniellia ogea</i>	Fabaceae	Near Threatened	1
42	<i>Daniellia thurifera</i>	Fabaceae	Least Concern	5
43	<i>Dialium aubrevillei</i>	Fabaceae	Least Concern	41
44	<i>Dialium dinklagei</i>	Fabaceae	Least Concern	6
45	<i>Dialium guianense</i>	Fabaceae	Least Concern	3
46	<i>Didelotia afzelii</i>	Fabaceae	Vulnerable	1
47	<i>Didelotia idae</i>	Fabaceae	Near Threatened	2
48	<i>Diospyros canaliculata</i>	Ebenaceae	Least Concern	1
49	<i>Diospyros chevalieri</i>	Ebenaceae	Least Concern	5
50	<i>Diospyros cooperi</i>	Ebenaceae	Least Concern	31
51	<i>Diospyros gabunensis</i>	Ebenaceae	Least Concern	11
52	<i>Diospyros sanza-minika</i>	Ebenaceae	Least Concern	49
53	<i>Diospyros vignei</i>	Ebenaceae	Least Concern	4
54	<i>Drypetes aubrevillei</i>	Putranjivaceae	Least Concern	1

55	<i>Drypetes chevalieri</i>	Putranjivaceae	Not Evaluated	2
56	<i>Entandrophragma angolense</i>	Meliaceae	Near Threatened	1
57	<i>Eriocoelum kerstingii</i>	Sapindaceae	Least Concern	2
58	<i>Erythrophleum ivorense</i>	Fabaceae	Least Concern	7
59	<i>Ficus sur</i>	Moraceae	Least Concern	2
60	<i>Funtumia africana</i>	Apocynaceae	Least Concern	15
61	<i>Funtumia elastica</i>	Apocynaceae	Least Concern	7
62	<i>Garcinia afzelii</i>	Clusiaceae	Vulnerable	1
63	<i>Garcinia kola</i>	Clusiaceae	Vulnerable	1
64	<i>Gardenia imperialis</i>	Rubiaceae	Least Concern	3
65	<i>Gilbertiodendron limba</i>	Fabaceae	Near Threatened	3
66	<i>Gilbertiodendron preussii</i>	Fabaceae	Least Concern	2
67	<i>Guibourtia ehie</i>	Fabaceae	Least Concern	1
68	<i>Harungana madagascariensis</i>	Hypericaceae	Least Concern	1
69	<i>Heisteria parvifolia</i>	Olacaceae	Least Concern	1
70	<i>Homalium le-testui</i>	Salicaceae	Least Concern	2
71	<i>Irvingia gabonensis</i>	Irvingiaceae	Near Threatened	5
72	<i>Ixora laxiflora</i>	Rubiaceae	Least Concern	2
73	<i>Khaya grandifoliola</i>	Meliaceae	Vulnerable	1
74	<i>Khaya ivorensis</i>	Meliaceae	Vulnerable	1
75	<i>Klainedoxa gabonensis</i>	Irvingiaceae	Least Concern	21
76	<i>Lophira alata</i>	Ochnaceae	Vulnerable	28
77	<i>Lovoa trichilioides</i>	Meliaceae	Least Concern	4
78	<i>Macaranga barteri</i>	Euphorbiaceae	Least Concern	1
79	<i>Macaranga hurifolia</i>	Euphorbiaceae	Not Evaluated	2
80	<i>Maesobotrya barteri</i>	Phyllanthaceae	Least Concern	5
81	<i>Mammea africana</i>	Calophyllaceae	Least Concern	11
82	<i>Maranthes aubrevillei</i>	Chrysobalanaceae	Not Evaluated	1
83	<i>Mareya micrantha</i>	Euphorbiaceae	Least Concern	5

84	<i>Margaritaria discoidea</i>	Phyllanthaceae	Least Concern	2
85	<i>Milicia excelsa</i>	Moraceae	Near Threatened	2
86	<i>Millettia lane-poolei</i>	Fabaceae	Least Concern	1
87	<i>Mitragyna ledermannii</i>	Rubiaceae	Near Threatened	1
88	<i>Musanga cecropioides</i>	Urticaceae	Least Concern	5
89	<i>Myrianthus arboreus</i>	Urticaceae	Least Concern	1
90	<i>Myrianthus libericus</i>	Urticaceae	Least Concern	3
91	<i>Napoleonaea vogelii</i>	Lecythidaceae	Least Concern	8
92	<i>Nauclea diderrichii</i>	Rubiaceae	Near Threatened	8
93	<i>Newbouldia laevis</i>	Bignoniaceae	Not Evaluated	2
94	<i>Newtonia aubrevillei</i>	Fabaceae	Not Evaluated	3
95	<i>Newtonia griffoniana</i>	Fabaceae	Not Evaluated	1
96	<i>Octoknema borealis</i>	Olacaceae	Least Concern	18
97	<i>Oldfieldia africana</i>	Picrodendraceae	Not Evaluated	6
98	<i>Ongokea gore</i>	Olacaceae	Least Concern	2
99	<i>Parinari congensis</i>	Chrysobalanaceae	Least Concern	9
100	<i>Parinari excelsa</i>	Chrysobalanaceae	Least Concern	35
102	<i>Parkia bicolor</i>	Fabaceae	Least Concern	25
103	<i>Pentaclethra macrophylla</i>	Fabaceae	Least Concern	12
104	<i>Pentadesma butyracea</i>	Clusiaceae	Least Concern	29
105	<i>Piptadeniastrum africanum</i>	Fabaceae	Least Concern	2
106	<i>Pouchetia africana</i>	Rubiaceae	Least Concern	1
107	<i>Protomegabaria stapfiana</i>	Phyllanthaceae	Least Concern	40
108	<i>Pterocarpus santalinoides</i>	Fabaceae	Least Concern	2
109	<i>Pterygota bequaertii</i>	Malvaceae	Vulnerable	2
110	<i>Ptychopetalum anceps</i>	Olacaceae	Least Concern	1
111	<i>Pycnanthus angolensis</i>	Myristicaceae	Least Concern	2
112	<i>Quassia undulata</i>	Simaroubaceae	Not Evaluated	4
113	<i>Ricinodendron heudelotii</i>	Euphorbiaceae	Least Concern	3

114	<i>Rinorea ilicifolia</i>	Violaceae	Least Concern	2
115	<i>Sacoglottis gabonensis</i>	Humiriaceae	Least Concern	20
116	<i>Santiria trimera</i>	Burseraceae	Least Concern	5
117	<i>Soyauxia grandifolia</i>	Peridiscaceae	Not Evaluated	6
118	<i>Sterculia tragacantha</i>	Malvaceae	Least Concern	2
119	<i>Strephonema pseudocola</i>	Combretaceae	Least Concern	5
120	<i>Strombosia pustulata</i>	Olacaceae	Least Concern	8
121	<i>Symphonia globulifera</i>	Clusiaceae	Least Concern	2
122	<i>Terminalia ivorensis</i>	Combretaceae	Vulnerable	5
123	<i>Terminalia superba</i>	Combretaceae	Not Evaluated	1
124	<i>Treculia africana</i>	Moraceae	Least Concern	1
125	<i>Turraea leonensis</i>	Meliaceae	Not Evaluated	1
126	<i>Uapaca guineensis</i>	Phyllanthaceae	Least Concern	35
127	<i>Uapaca heudelotii</i>	Phyllanthaceae	Least Concern	3
128	<i>Vitex micrantha</i>	Lamiaceae	Least Concern	5
129	<i>Vitex rivularis</i>	Lamiaceae	Least Concern	1
130	<i>Warneckea fascicularis</i>	Melastomataceae	Endangered	1
131	<i>Warneckea guineensis</i>	Melastomataceae	Not Evaluated	3
132	<i>Xylia evansii</i>	Fabaceae	Least Concern	3
133	<i>Xylopiya acutiflora</i>	Annonaceae	Least Concern	45
134	<i>Xylopiya aethiopica</i>	Annonaceae	Least Concern	9
135	<i>Xylopiya parviflora</i>	Annonaceae	Least Concern	6
136	<i>Xylopiya quintasii</i>	Annonaceae	Least Concern	8
137	<i>Xylopiya staudtii</i>	Annonaceae	Least Concern	16
138	<i>Zanthoxylum gillettii</i>	Rutaceae	Least Concern	2
Total				1,017

Stand tables

Stem numbers per hectare estimates for all species grouped according to diameter class (30%-80% forest canopy cover) for the Tonglay Community Forest

No	scientific_name	< 10 cm	>= 100 cm	0	10-19.99 cm	20-29.99 cm	30-39.99 cm	40-49.99 cm	50-59.99 cm	60-69.99 cm	70-79.99 cm	80-89.99 cm	90-99.99 cm
1	Albizia adianthifolia	0	0	0	0	0	0	0	0.192635	0	0	0	0
2	Albizia zygia	0	0	0	1.297589	0	0	0.192635	0	0	0	0	0
3	Androsiphonia adenostegia	15.60343	0	0	0	0	0	0	0	0	0	0	0
4	Annickia polycarpa	15.60343	0	0	0	0	0	0	0	0	0	0	0
5	Anopyxis klaineana	0	0	0	0	0	1.273749	0	0	0	0	0	0
6	Anthocleista vogelii	15.60343	0	0	0	1.273749	0	0	0	0	0	0	0
7	Anthonotha fragrans	0	0	0	3.821247	2.547498	0	0	0.204998	0.204998	0.192635	0	0
8	Anthonotha macrophylla	0	0	0	1.273749	0	0	0	0	0	0	0	0
9	Antrocaryon micraster	15.60343	0	0	1.273749	0	0	0	0	0	0	0	0
10	Baphia pubescens	0	0	0	0	1.297589	0	0	0	0	0	0	0

11	Beilschmiedia mannii	0	0	0	0	1.339299	0	0	0	0	0	0	0
12	Bridelia grandis	0	0	0	2.604411	0	0	0	0	0	0	0	0
13	Bussea occidentalis	0	0	0	1.273749	1.293399	0	0	0.192635	0	0	0	0
14	Calpocalyx aubrevillei	0	0	0	0	0	0	0	0.204998	0.192635	0	0	0
15	Calpocalyx brevibracteatus	0	0	0	2.547498	2.547498	0	0.192635	0	0	0	0	0
16	Canarium schweinfurthii	0	0	0	0	0	0	0.408834	0	0	0.192635	0	0
17	Carapa procera	47.15887	0	0	0	2.613048	0	0	0	0	0	0	0
18	Chidlowia sanguinea	0	0	0	0	1.355495	0	0	0	0	0	0	0
19	Chrysophyllum subnudum	15.60343	0	0	1.273749	0	0	0	0	0	0.202548	0	0
20	Cleistopholis patens	0	0	0	0	1.273749	0	0	0	0	0	0	0
21	Coula edulis	0	0	0	0	0	0	0	0.192635	0	0	0	0
22	Cryptosepalum tetraphyllum	0	0	0	0	0	0	0.192635	0	0	0	0	0

23	Dacryodes klaineana	0	0	0	0	1.273749	0	0	0.204998	0	0	0	0
24	Dialium aubrevillei	15.60343	0	0	1.355495	2.571338	1.355495	0.204998	0	0	0	0	0
25	Dialium dinklagei	0	0	0	0	1.273749	0	0	0	0	0	0	0
26	Dialium guianense	0	0	0	1.297589	0	1.297589	0.19624	0	0	0	0	0
27	Diospyros cooperi	33.4076	0	0	5.278139	0	0	0	0	0	0	0	0
28	Diospyros gabunensis	15.60343	0	0	2.613048	0	0	0	0	0	0	0	0
29	Diospyros sanza-minika	16.60482	0	0	0	0	0	0	0	0	0	0	0
30	Drypetes chevalieri	15.60343	0	0	0	0	0	0	0	0	0	0	0
31	Entandrophragma angolense	0	0	0	0	0	0	0.192635	0	0	0	0	0
32	Erythrophleum ivorense	0	0	0	0	0	0	0	0	0.202548	0	0	0
33	Ficus sur	0	0	0	0	2.547498	0	0	0	0	0	0	0
34	Funtumia africana	46.81028	0	0	1.273749	0	0	0	0	0	0	0	0
35	Funtumia elastica	0	0	0	0	0	1.273749	0	0	0	0	0	0
36	Garcinia afzelii	15.60343	0	0	0	0	0	0	0	0	0	0	0

37	Gardenia imperialis	0	0	0	3.821247	0	0	0	0	0	0	0	0
38	Gilbertiodendron limba	0	0	0	2.586797	0	0	0	0	0	0	0	0
39	Harungana madagascariensis	0	0	0	1.302205	0	0	0	0	0	0	0	0
40	Heisteria parvifolia	15.60343	0	0	0	0	0	0	0	0	0	0	0
41	Ixora laxiflora	15.60343	0	0	0	0	0	0	0	0	0	0	0
42	Klainedoxa gabonensis	0	0	0	0	0	1.355495	0.204998	0	0	0	0	0
43	Lophira alata	0	0	0	0	0	0	0.192635	0.192635	0	0.204998	0.192635	0
44	Macaranga barteri	0	0	0	1.273749	0	0	0	0	0	0	0	0
45	Mareya micrantha	47.45091	0	0	0	0	0	0	0	0	0	0	0
46	Milicia excelsa	0	0	0	1.302205	0	0	0	0	0	0	0	0
47	Millettia lane-polei	0	0	0	1.302205	0	0	0	0	0	0	0	0
48	Musanga cecropioides	0	0	0	2.604411	0	0	0	0	0	0	0	0
49	Myrianthus arboreus	0	0	0	0	1.293399	0	0	0	0	0	0	0

50	Napoleonaea heudelotii	15.60343	0	0	0	0	0	0	0	0	0	0	0
51	Nauclea diderrichii	0	0	0	0	0	1.429562	0	0.204998	0	0	0	0
52	Newbouldia laevis	15.60343	0	0	1.273749	0	0	0	0	0	0	0	0
53	Newtonia aubrevillei	0	0	0	0	0	0	0	0	0.192635	0	0	0
54	Oldfieldia africana	0	0	0	0	0	0	0	0	0.202548	0	0	0.192635
55	Parinari excelsa	0	0	0	2.547498	0	0	0.38527	0	0	0	0.202548	0
56	Parkia bicolor	0	0	0	0	0	0	0	0	0	0	0.411806	0
57	Pentadesma butyracea	0	0	0	0	0	0	0.202548	0	0	0	0	0
58	Pouchetia africana	0	0	0	1.302205	0	0	0	0	0	0	0	0
59	Protomegabaria stapfiana	62.4137	0	0	1.273749	0	0	0	0	0	0	0	0
60	Pycnanthus angolensis	0	0	0	1.355495	0	0	0	0	0	0	0	0
61	Ricinodendron heudelotii	0	0	0	0	0	0	0	0.192635	0	0	0	0
62	Sterculia tragacantha	15.60343	0	0	0	0	0	0	0	0	0	0	0
63	Strombosia pustulata	0	0	0	1.429562	0	1.429562	0	0	0	0	0	0

64	Tarrietia utilis	0	0	0	0	0	0	0.807628	0.204998	0.409996	0	0	0
65	Terminalia ivorensis	0	0	0	0	0	1.273749	0	0.192635	0.192635	0	0	0
66	Terminalia superba	0	0	0	0	0	0	0	0	0.192635	0	0	0
67	Treculia africana	15.60343	0	0	0	0	0	0	0	0	0	0	0
68	Uapaca guineensis	0	0	0	1.355495	0	0	0	0	0	0	0	0
69	Uapaca heudelotii	0	0	0	1.302205	0	0	0	0	0	0	0	0
70	Warneckea fascicularis	15.60343	0	0	0	0	0	0	0	0	0	0	0
71	Warneckea guineensis	17.51213	0	0	0	0	0	0	0	0	0	0	0
72	Xylia evansii	0	0	0	0	1.297589	0	0	0	0	0.192635	0.19624	0
73	Xylopia aethiopica	0	0	0	0	0	1.273749	0	0	0	0	0	0
74	Xylopia quintasii	0	0	0	0	1.339299	0	0	0	0	0	0	0
75	Zanthoxylum gillettii	0	0	0	1.273749	1.273749	0	0	0	0	0	0	0

Stem numbers per hectare estimates for all species grouped according to diameter class (80%-100% forest canopy cover) for the Tonglay Community Forest

No	scientific_name	< 10 cm	>= 100 cm	0	10-19.99 cm	20-29.99 cm	30-39.99 cm	40-49.99 cm	50-59.99 cm	60-69.99 cm	70-79.99 cm	80-89.99 cm	90-99.99 cm
1	Afzelia bella	0	0	0	0	0	0	0	0	0	0	0.055601	0
2	Albizia adianthifolia	4.420971	0	0	0	0	0	0	0	0	0	0	0
3	Albizia zygia	4.437858	0	0	0.36765	0	0.360896	0	0.111203	0	0	0	0
4	Allanblackia parviflora	4.704699	0	0	0	0	0	0	0	0	0	0	0
5	Alstonia boonei	0	0	0	0	0	0	0	0	0	0	0	0.05458
6	Amphimas pterocarpoides	0	0	0	0.398204	0	0	0	0.083133	0	0	0	0
7	Androsiphonia adenostegia	18.0445	0	0	0	0	0	0	0	0	0	0	0
8	Annickia polycarpa	0	0	0	1.103985	0	0	0	0	0	0	0	0
9	Anopyxis klaineana	0	0	0	0	0	0	0	0.113043	0	0	0	0
10	Anthonotha crassifolia	0	0	0	0.373627	0	0	0	0	0	0	0	0
11	Anthonotha fragrans	4.648484	0	0	0.746331	0.379468	0	0.054655	0.164341	0.05458	0.054713	0	0

12	<i>Anthonotha macrophylla</i>	13.94746	0	0	0.747253	0	0.362883	0	0	0	0	0	0
13	<i>Antiaris toxicaria</i>	0	0	0	0	0	0	0	0	0	0	0.083133	0
14	<i>Aubrevillea platycarpa</i>	0	0	0	0	0	0	0.05458	0	0.05458	0	0	0
15	<i>Beilschmiedia mannii</i>	0	0	0	0.754908	0	0.365394	0.054881	0	0.056505	0	0	0
16	<i>Berlinia confusa</i>	0	0	0	0	0	0	0.115011	0	0	0	0	0
17	<i>Bertiera spicata</i>	4.476079	0	0	0	0	0	0	0	0	0	0	0
18	<i>Bombax buonopozense</i>	0	0	0	0	0	0	0	0.054655	0.114588	0	0.060222	0
19	<i>Bridelia grandis</i>	4.420971	0	0	0	0.392063	0	0.05526	0	0	0	0	0
20	<i>Bussea occidentalis</i>	0	0	0	1.290058	0	1.142115	0.281737	0	0	0	0	0
21	<i>Caloncoba brevipes</i>	4.464418	0	0	0.722286	0	0	0	0	0	0	0	0
22	<i>Caloncoba echinata</i>	4.454171	0	0	0	0	0	0	0	0	0	0	0
23	<i>Calpocalyx aubrevillei</i>	8.866293	0	0	1.119358	0.747467	1.159292	0.167242	0.171956	0.05458	0.060222	0	0.058083

24	Campylospermum amplexans	18.17606	0	0	0	0	0	0	0	0	0	0	0
25	Campylospermum duparquetianum	4.648484	0	0	0	0	0	0	0	0	0	0	0
26	Campylospermum reticulatum	4.431766	0	0	0	0	0	0	0	0	0	0	0
27	Canarium schweinfurthii	0	0	0	0	0	0	0.055601	0.166804	0	0	0.054788	0
28	Carapa procera	55.41019	0	0	16.83935	3.795726	0.7591	0.059293	0	0	0	0	0
29	Celtis adolfi-friderici	17.79376	0	0	0.723554	0	0	0	0	0	0	0	0
30	Chidlowia sanguinea	0	0	0	0	0.373627	0	0.109997	0	0	0	0	0
31	Chrysophyllum africanum	4.437858	0	0	0	0.364442	0.398204	0.060222	0	0.058083	0	0	0
32	Chrysophyllum albidum	0	0	0	0	0	0.363606	0	0	0	0	0	0
33	Chrysophyllum perpulchrum	0	0	0	0	0	0	0.116165	0.058083	0	0	0	0

34	<i>Chrysophyllum subnudum</i>	0	0	0	0	0	0	0.056779	0	0	0	0	0
35	<i>Cola buntingii</i>	4.878001	0	0	0	0	0	0	0	0	0	0	0
36	<i>Cola lateritia</i>	0	0	0	0.398204	0	0	0	0	0	0	0	0
37	<i>Coula edulis</i>	0	0	0	0	0	0	0	0	0	0.058083	0	0
38	<i>Cryptosepalum tetraphyllum</i>	0	0	0	0.36765	0	0	0.055601	0	0	0	0	0
39	<i>Dacryodes klaineana</i>	13.431	0	0	1.462272	0	1.121983	0.120444	0.056505	0	0	0	0
40	<i>Daniellia ogea</i>	0	0	0	0	0.373627	0	0	0	0	0	0	0
41	<i>Daniellia thurifera</i>	0	0	0	0.398204	0.384057	0	0.057389	0.112177	0	0	0	0
42	<i>Dialium aubrevillei</i>	13.42493	0	0	1.905339	2.566633	2.241206	0.456646	0.172727	0.118305	0	0	0.05458
43	<i>Dialium dinklagei</i>	0	0	0	0	0.384057	0.362883	0.054881	0.113188	0	0	0	0
44	<i>Didelotia idae</i>	0	0	0	0	0	0.384057	0.058083	0	0	0	0	0
45	<i>Diospyros canaliculata</i>	4.735501	0	0	0	0	0	0	0	0	0	0	0
46	<i>Diospyros chevalieri</i>	18.76258	0	0	0.398204	0	0	0	0	0	0	0	0
47	<i>Diospyros cooperi</i>	82.32128	0	0	1.47198	0.362883	0	0	0	0	0	0	0

48	Diospyros gabunensis	31.44917	0	0	0.549694	0	0	0	0	0	0	0	0
49	Diospyros sanzaminika	46.47215	0	0	7.592701	1.084675	1.508341	0.054881	0	0	0	0	0
50	Diospyros vignei	13.83037	0	0	0.398204	0	0	0	0	0	0	0	0
51	Drypetes aubrevillei	4.503717	0	0	0	0	0	0	0	0	0	0	0
52	Drypetes chevalieri	4.576926	0	0	0	0	0	0	0	0	0	0	0
53	Eriocoelum kerstingii	9.5827	0	0	0	0	0	0	0	0	0	0	0
54	Erythrophleum ivorense	0	0	0	0	0.363606	0	0	0.054655	0.169665	0.05499	0.057389	0
55	Funtumia africana	4.445323	0	0	1.489905	1.096408	0	0.166582	0	0	0	0	0
56	Funtumia elastica	4.454171	0	0	0.366463	0.362883	0	0.138393	0	0	0	0	0
57	Garcinia kola	0	0	0	0	0	0.363606	0	0	0	0	0	0
58	Gilbertiodendron limba	0	0	0	0	0	0	0	0	0.056505	0	0	0
59	Gilbertiodendron preussii	0	0	0	0	0.364442	0	0	0	0	0.056505	0	0
60	Guibourtia ehie	0	0	0	0	0.373627	0	0	0	0	0	0	0
61	Homalium le-testui	0	0	0	0.796408	0	0	0	0	0	0	0	0

62	<i>Irvingia gabonensis</i>	4.437858	0	0	0.362883	0.368958	0.368958	0.05526	0	0	0	0	0
63	<i>Ixora laxiflora</i>	4.420971	0	0	0	0	0	0	0	0	0	0	0
64	<i>Khaya grandifoliola</i>	0	0	0	0.36765	0	0	0	0	0	0	0	0
65	<i>Klainedoxa gabonensis</i>	4.704699	0	0	1.542242	0.384057	0.384057	0.055799	0.05458	0.233776	0.16374	0.10946	0.057389
66	<i>Lophira alata</i>	0	0.112102	0	0.726489	0.379468	0.398204	0.114588	0.109577	0.060222	0	0.056505	0.060222
67	<i>Lovoa trichilioides</i>	0	0	0	0.384057	0	0	0	0.112381	0	0.055601	0	0
68	<i>Macaranga hurifolia</i>	0	0	0	0.392063	0	0	0	0	0	0	0	0
69	<i>Maesobotrya barteri</i>	22.45272	0	0	0	0	0	0	0	0	0	0	0
70	<i>Mammea africana</i>	0	0	0	1.534154	1.128534	0.737232	0.054881	0.05458	0	0	0	0
71	<i>Maranthes aubrevillei</i>	0	0	0	0.36765	0	0	0	0	0	0	0	0
72	<i>Mareya micrantha</i>	4.878001	0	0	0.379468	0	0	0	0	0	0	0	0
73	<i>Margaritaria discoidea</i>	0	0	0	0.384057	0	0	0	0	0.058083	0	0	0
74	<i>Microdesmis keayana</i>	0	0	0	0.549694	0	0	0	0	0	0	0	0

75	<i>Milicia excelsa</i>	0	0	0	0	0	0	0	0.055601	0	0	0	0
76	<i>Mitragyna ledermannii</i>	0	0	0	0	0	0.363606	0	0	0	0	0	0
77	<i>Musanga cecropioides</i>	8.875716	0	0	0.362274	0	0	0	0	0	0	0	0
78	<i>Myrianthus libericus</i>	0	0	0	1.106839	0	0	0	0	0	0	0	0
79	<i>Napoleonaea vogelii</i>	27.7141	0	0	0.929162	0	0	0	0	0	0	0	0
80	<i>Nauclea diderrichii</i>	0	0.056505	0	0	0	0	0	0	0	0.171988	0	0.057389
81	<i>Newtonia aubrevillei</i>	0	0	0	0.368958	0	0	0	0	0	0.05458	0	0
82	<i>Newtonia griffoniana</i>	0	0	0	0	0	0	0.05499	0	0	0	0	0
83	<i>Octoknema borealis</i>	13.57099	0	0	2.187546	1.468732	0	0	0	0	0	0	0
84	<i>Oldfieldia africana</i>	0	0	0	0	0	0	0	0	0	0.060222	0.054881	0.054881
85	<i>Ongokea gore</i>	0	0	0	0	0	0.362883	0.058083	0	0	0	0	0
86	<i>Parinari congensis</i>	0	0	0	1.099846	0	0.398204	0.054881	0	0.056505	0.111495	0	0
87	<i>Parinari excelsa</i>	0	0.083133	0	0	0	0.384057	0	0.167242	0.223748	0.22945	0	0.167923
88	<i>Parkia bicolor</i>	0	0	0	1.132152	0.398204	0	0	0.056505	0.171988	0.05458	0	0.116682

89	Pentaclethra macrophylla	0	0	0	0	0	0.365394	0.05526	0	0.05526	0	0.054788	0
90	Pentadesma butyracea	32.80031	0	0	2.628299	0	1.846258	0.165092	0.10987	0.059293	0	0	0
91	Piptadeniastrum africanum	0	0.054881	0	0	0	0	0	0	0	0.054655	0	0
92	Protomegabaria stapfiana	35.41176	0	0	2.573604	3.049005	1.145867	0	0	0	0	0	0
93	Pterocarpus santalinoides	0	0	0	0	0.362883	0	0	0.054881	0	0	0	0
94	Pterygota bequaertii	0	0	0	0.398204	0.361777	0	0	0	0	0	0	0
95	Pterygota macrocarpa	0	0	0	0	0	0	0	0	0.057389	0	0	0
96	Ptychopetalum anceps	4.878001	0	0	0	0	0	0	0	0	0	0	0
97	Pycnanthus angolensis	0	0	0	0	0	0	0.054881	0	0	0	0	0
98	Quassia undulata	0	0	0	0.735017	0	0	0.054881	0	0	0.058083	0	0
99	Ricinodendron heudelotii	0	0	0	0	0	0	0	0	0.054655	0	0	0
100	Rinorea ilicifolia	9.150021	0	0	0	0	0	0	0	0	0	0	0

101	<i>Sacoglottis gabonensis</i>	4.802767	0.384886	0	0.7591	0	0	0	0.10916	0	0.16486	0.111085	0.114802
102	<i>Samanea dinklagei</i>	0	0	0	0	0	0	0	0	0	0.058463	0	0
103	<i>Santiria trimera</i>	0	0	0	1.450268	0.362883	0	0	0	0	0	0	0
104	<i>Soyauxia grandifolia</i>	22.35903	0	0	0.363606	0	0	0	0	0	0	0	0
105	<i>Sterculia tragacantha</i>	0	0	0	0	0.361391	0	0	0	0	0	0	0
106	<i>Strephonema pseudocola</i>	4.427038	0	0	0.740859	0	0.365394	0.054881	0	0	0	0	0
107	<i>Strombosia pustulata</i>	0	0	0	0.384057	0.917345	0.754908	0.054655	0	0	0	0	0
108	<i>Symphonia globulifera</i>	0	0	0	0.360896	0	0.363606	0	0	0	0	0	0
109	<i>Synsepalum brevipes</i>	0	0	0	0	0.360896	0	0	0.055116	0.05458	0	0	0
110	<i>Tarrietia utilis</i>	0	0	0	1.44915	0.384057	1.137152	0.450614	0.224631	0.402423	0.060222	0	0
111	<i>Terminalia ivorensis</i>	0	0	0	0	0	0	0	0	0	0	0	0.054881
112	<i>Turraea leonensis</i>	4.437858	0	0	0	0	0	0	0	0	0	0	0

113	Uapaca guineensis	8.899494	0	0	1.527214	0	0.362883	0.170051	0	0.111116	0.054713	0	0
114	Uapaca heudelotii	4.576926	0	0	0.373627	0	0	0	0	0	0	0	0
115	Vitex micrantha	0	0	0	0.740859	0	0.379468	0	0	0	0	0	0
116	Vitex rivularis	4.476079	0	0	0	0	0	0	0	0	0	0	0
117	Warneckea guineensis	0	0	0	0.749066	0	0	0	0	0	0	0	0
118	Xylopia acutiflora	24.39001	0	0	1.508478	0	0	0	0	0	0	0	0
119	Xylopia aethiopica	0	0	0	2.270584	0.392063	0.360896	0	0	0	0	0	0
120	Xylopia parviflora	22.90421	0	0	0.373627	0	0	0	0	0	0	0	0
121	Xylopia quintasii	4.878001	0	0	0.398204	0.379468	0.746941	0.054788	0	0	0	0	0
122	Xylopia staudtii	9.5827	0	0	3.410026	1.132726	0.373627	0	0.054881	0	0	0	0

Mean basal area per hectare estimates (m²/ha) for all species grouped according to diameter class (30%-80% forest canopy cover) for the Tonglay Community Forest

No	scientific_name	< 10 cm	>= 100 cm	0	10-19.99 cm	20-29.99 cm	30-39.99 cm	40-49.99 cm	50-59.99 cm	60-69.99 cm	70-79.99 cm	80-89.99 cm	90-99.99 cm
1	Albizia adianthifolia	0	0	0	0	0	0	0	0.046435	0	0	0	0
2	Albizia zygia	0	0	0	0.012557	0	0	0.035149	0	0	0	0	0
3	Androsiphonia adenostegia	0.060049	0	0	0	0	0	0	0	0	0	0	0
4	Annickia polycarpa	0.023725	0	0	0	0	0	0	0	0	0	0	0
5	Anopyxis klaineana	0	0	0	0	0	0.102441	0	0	0	0	0	0
6	Anthocleista vogelii	0.065306	0	0	0	0.045387	0	0	0	0	0	0	0
7	Anthonotha fragrans	0	0	0	0.046795	0.109628	0	0	0.045226	0.074449	0.079524	0	0
8	Anthonotha macrophylla	0	0	0	0.028572	0	0	0	0	0	0	0	0
9	Antrocaryon micraster	0.086471	0	0	0.012105	0	0	0	0	0	0	0	0
10	Baphia pubescens	0	0	0	0	0.066269	0	0	0	0	0	0	0
11	Beilschmiedia mannii	0	0	0	0	0.042075	0	0	0	0	0	0	0

12	<i>Bridelia grandis</i>	0	0	0	0.046899	0	0	0	0	0	0	0	0
13	<i>Bussea occidentalis</i>	0	0	0	0.021033	0.069731	0	0	0.045933	0	0	0	0
14	<i>Calpocalyx aubrevillei</i>	0	0	0	0	0	0	0	0.040251	0.059478	0	0	0
15	<i>Calpocalyx brevibracteatus</i>	0	0	0	0.062474	0.094263	0	0.029291	0	0	0	0	0
16	<i>Canarium schweinfurthii</i>	0	0	0	0	0	0	0.060741	0	0	0.074135	0	0
17	<i>Carapa procera</i>	0.118126	0	0	0	0.10439	0	0	0	0	0	0	0
18	<i>Chidlowia sanguinea</i>	0	0	0	0	0.071967	0	0	0	0	0	0	0
19	<i>Chrysophyllum subnudum</i>	0.0206	0	0	0.015631	0	0	0	0	0	0.081554	0	0
20	<i>Cleistopholis patens</i>	0	0	0	0	0.05956	0	0	0	0	0	0	0
21	<i>Coula edulis</i>	0	0	0	0	0	0	0	0.047277	0	0	0	0
22	<i>Cryptosepalum tetraphyllum</i>	0	0	0	0	0	0	0.029424	0	0	0	0	0
23	<i>Dacryodes klaineana</i>	0	0	0	0	0.087651	0	0	0.040251	0	0	0	0

24	Dialium aubrevillei	0.050196	0	0	0.020866	0.13037	0.145744	0.028401	0	0	0	0	0
25	Dialium dinklagei	0	0	0	0	0.071853	0	0	0	0	0	0	0
26	Dialium guianense	0	0	0	0.01618	0	0.147937	0.032755	0	0	0	0	0
27	Diospyros cooperi	0.140184	0	0	0.060784	0	0	0	0	0	0	0	0
28	Diospyros gabunensis	0.105993	0	0	0.036408	0	0	0	0	0	0	0	0
29	Diospyros sanzaminika	0.105635	0	0	0	0	0	0	0	0	0	0	0
30	Drypetes chevalieri	0.023725	0	0	0	0	0	0	0	0	0	0	0
31	Entandrophragma angolense	0	0	0	0	0	0	0.026688	0	0	0	0	0
32	Erythrophleum ivorense	0	0	0	0	0	0	0	0	0.063944	0	0	0
33	Ficus sur	0	0	0	0	0.088435	0	0	0	0	0	0	0
34	Funtumia africana	0.192782	0	0	0.012105	0	0	0	0	0	0	0	0
35	Funtumia elastica	0	0	0	0	0	0.093062	0	0	0	0	0	0
36	Garcinia afzelii	0.105993	0	0	0	0	0	0	0	0	0	0	0
37	Gardenia imperialis	0	0	0	0.038369	0	0	0	0	0	0	0	0

38	Gilbertiodendron limba	0	0	0	0.050087	0	0	0	0	0	0	0	0
39	Harungana madagascariensis	0	0	0	0.026511	0	0	0	0	0	0	0	0
40	Heisteria parvifolia	0.011029	0	0	0	0	0	0	0	0	0	0	0
41	Ixora laxiflora	0.047108	0	0	0	0	0	0	0	0	0	0	0
42	Klainedoxa gabonensis	0	0	0	0	0	0.109015	0.025761	0	0	0	0	0
43	Lophira alata	0	0	0	0	0	0	0.026943	0.037824	0	0.090565	0.105487	0
44	Macaranga barteri	0	0	0	0.024346	0	0	0	0	0	0	0	0
45	Mareya micrantha	0.090771	0	0	0	0	0	0	0	0	0	0	0
46	Milicia excelsa	0	0	0	0.012601	0	0	0	0	0	0	0	0
47	Millettia lane- poolei	0	0	0	0.012375	0	0	0	0	0	0	0	0
48	Musanga cecropioides	0	0	0	0.046798	0	0	0	0	0	0	0	0
49	Myrianthus arboreus	0	0	0	0	0.080211	0	0	0	0	0	0	0
50	Napoleonaea heudelotii	0.044118	0	0	0	0	0	0	0	0	0	0	0

51	Nauclea diderrichii	0	0	0	0	0	0.107899	0	0.046949	0	0	0	0
52	Newbouldia laevis	0.050196	0	0	0.013001	0	0	0	0	0	0	0	0
53	Newtonia aubrevillei	0	0	0	0	0	0	0	0	0.069959	0	0	0
54	Oldfieldia africana	0	0	0	0	0	0	0	0	0.064753	0	0	0.136544
55	Parinari excelsa	0	0	0	0.048071	0	0	0.063264	0	0	0	0.119855	0
56	Parkia bicolor	0	0	0	0	0	0	0	0	0	0	0.233679	0
57	Pentadesma butyracea	0	0	0	0	0	0	0.029414	0	0	0	0	0
58	Pouchetia africana	0	0	0	0.026841	0	0	0	0	0	0	0	0
59	Protomegabaria stapfiana	0.106483	0	0	0.014647	0	0	0	0	0	0	0	0
60	Pycnanthus angolensis	0	0	0	0.010646	0	0	0	0	0	0	0	0
61	Ricinodendron heudelotii	0	0	0	0	0	0	0	0.052309	0	0	0	0
62	Sterculia tragacantha	0.019608	0	0	0	0	0	0	0	0	0	0	0
63	Strombosia pustulata	0	0	0	0.029831	0	0.151225	0	0	0	0	0	0
64	Tarrietia utilis	0	0	0	0	0	0	0.118167	0.048704	0.136049	0	0	0

65	<i>Terminalia ivorensis</i>	0	0	0	0	0	0.122549	0	0.037975	0.069959	0	0	0
66	<i>Terminalia superba</i>	0	0	0	0	0	0	0	0	0.069959	0	0	0
67	<i>Treculia africana</i>	0.029424	0	0	0	0	0	0	0	0	0	0	0
68	<i>Uapaca guineensis</i>	0	0	0	0.010646	0	0	0	0	0	0	0	0
69	<i>Uapaca heudelotii</i>	0	0	0	0.013059	0	0	0	0	0	0	0	0
70	<i>Warneckea fascicularis</i>	0.099265	0	0	0	0	0	0	0	0	0	0	0
71	<i>Warneckea guineensis</i>	0.132093	0	0	0	0	0	0	0	0	0	0	0
72	<i>Xylia evansii</i>	0	0	0	0	0.082198	0	0	0	0	0.078431	0.116659	0
73	<i>Xylopi aethiopica</i>	0	0	0	0	0	0.108284	0	0	0	0	0	0
74	<i>Xylopi quintasii</i>	0	0	0	0	0.076682	0	0	0	0	0	0	0
75	<i>Zanthoxylum gillettii</i>	0	0	0	0.023418	0.040016	0	0	0	0	0	0	0

Mean basal area per hectare estimates (m²/ha) for all species grouped according to diameter class (80%-100% forest canopy cover) for the Tonglay Community Forest

No	scientific_name	< 10 cm	>= 100 cm	0	10-19.99 cm	20-29.99 cm	30-39.99 cm	40-49.99 cm	50-59.99 cm	60-69.99 cm	70-79.99 cm	80-89.99 cm	90-99.99 cm
1	Afzelia bella	0	0	0	0	0	0	0	0	0	0	0.03052	0
2	Albizia adianthifolia	0.001681	0	0	0	0	0	0	0	0	0	0	0
3	Albizia zygia	0.017079	0	0	0.004369	0	0.038804	0	0.025334	0	0	0	0
4	Allanblackia parviflora	0.005912	0	0	0	0	0	0	0	0	0	0	0
5	Alstonia boonei	0	0	0	0	0	0	0	0	0	0	0	0.038687
6	Amphimas pterocarpoides	0	0	0	0.003254	0	0	0	0.022728	0	0	0	0
7	Androsiphonia adenostegia	0.015199	0	0	0	0	0	0	0	0	0	0	0
8	Annickia polycarpa	0	0	0	0.01549	0	0	0	0	0	0	0	0
9	Anopyxis klaineana	0	0	0	0	0	0	0	0.028871	0	0	0	0
10	Anthonotha crassifolia	0	0	0	0.010262	0	0	0	0	0	0	0	0
11	Anthonotha fragrans	0.003286	0	0	0.005862	0.014425	0	0.008692	0.037376	0.018391	0.021056	0	0

12	<i>Anthonotha macrophylla</i>	0.010289	0	0	0.019488	0	0.034913	0	0	0	0	0	0
13	<i>Antiaris toxicaria</i>	0	0	0	0	0	0	0	0	0	0	0.04942	0
14	<i>Aubrevillea platycarpa</i>	0	0	0	0	0	0.006927	0	0.018223	0	0	0	0
15	<i>Beilschmiedia mannii</i>	0	0	0	0.012846	0	0.031632	0.00797	0	0.01875	0	0	0
16	<i>Berlinia confusa</i>	0	0	0	0	0	0	0.017599	0	0	0	0	0
17	<i>Bertiera spicata</i>	0.003164	0	0	0	0	0	0	0	0	0	0	0
18	<i>Bombax buonopozense</i>	0	0	0	0	0	0	0	0.012985	0.038024	0	0.030271	0
19	<i>Bridelia grandis</i>	0.005556	0	0	0	0.016289	0	0.006944	0	0	0	0	0
20	<i>Bussea occidentalis</i>	0	0	0	0.018461	0	0.127588	0.043996	0	0	0	0	0
21	<i>Caloncoba brevipes</i>	0.00337	0	0	0.011037	0	0	0	0	0	0	0	0
22	<i>Caloncoba echinata</i>	0.013885	0	0	0	0	0	0	0	0	0	0	0
23	<i>Calpocalyx aubrevillei</i>	0.046846	0	0	0.017046	0.035484	0.128264	0.024795	0.04273	0.018111	0.026605	0	0.04117

24	Campylospermum amplexans	0.008687	0	0	0	0	0	0	0	0	0	0	0
25	Campylospermum duparquetianum	0.013143	0	0	0	0	0	0	0	0	0	0	0
26	Campylospermum reticulatum	0.001841	0	0	0	0	0	0	0	0	0	0	0
27	Canarium schweinfurthii	0	0	0	0	0	0	0.010528	0.038395	0	0	0.03109	0
28	Carapa procera	0.107495	0	0	0.281987	0.169658	0.060923	0.00943	0	0	0	0	0
29	Celtis adolfi-friderici	0.042782	0	0	0.008411	0	0	0	0	0	0	0	0
30	Chidlowia sanguinea	0	0	0	0	0.014203	0	0.017888	0	0	0	0	0
31	Chrysophyllum africanum	0.003137	0	0	0	0.013108	0.045877	0.008146	0	0.017706	0	0	0
32	Chrysophyllum albidum	0	0	0	0	0	0.032049	0	0	0	0	0	0
33	Chrysophyllum perpulchrum	0	0	0	0	0	0	0.020163	0.011405	0	0	0	0

34	<i>Chrysophyllum subnudum</i>	0	0	0	0	0	0	0.008246	0	0	0	0	0
35	<i>Cola buntingii</i>	0.028335	0	0	0	0	0	0	0	0	0	0	0
36	<i>Cola lateritia</i>	0	0	0	0.008515	0	0	0	0	0	0	0	0
37	<i>Coula edulis</i>	0	0	0	0	0	0	0	0	0	0.02431	0	0
38	<i>Cryptosepalum tetraphyllum</i>	0	0	0	0.01098	0	0	0.008648	0	0	0	0	0
39	<i>Dacryodes klaineana</i>	0.040456	0	0	0.019816	0	0.116209	0.018924	0.013425	0	0	0	0
40	<i>Daniellia ogea</i>	0	0	0	0	0.023171	0	0	0	0	0	0	0
41	<i>Daniellia thurifera</i>	0	0	0	0.00613	0.012066	0	0.010385	0.025218	0	0	0	0
42	<i>Dialium aubrevillei</i>	0.036057	0	0	0.032917	0.111855	0.217329	0.074062	0.041633	0.038121	0	0	0.035109
43	<i>Dialium dinklagei</i>	0	0	0	0	0.023648	0.035918	0.007388	0.025485	0	0	0	0
44	<i>Didelotia idae</i>	0	0	0	0	0	0.036951	0.009238	0	0	0	0	0
45	<i>Diospyros canaliculata</i>	0.012947	0	0	0	0	0	0	0	0	0	0	0
46	<i>Diospyros chevalieri</i>	0.039549	0	0	0.010133	0	0	0	0	0	0	0	0
47	<i>Diospyros cooperi</i>	0.145704	0	0	0.021077	0.015077	0	0	0	0	0	0	0

48	Diospyros gabunensis	0.100059	0	0	0.004317	0	0	0	0	0	0	0	0
49	Diospyros sanzaminika	0.043805	0	0	0.114569	0.038915	0.146135	0.006896	0	0	0	0	0
50	Diospyros vignei	0.012391	0	0	0.004579	0	0	0	0	0	0	0	0
51	Drypetes aubrevillei	0.00624	0	0	0	0	0	0	0	0	0	0	0
52	Drypetes chevalieri	0.030426	0	0	0	0	0	0	0	0	0	0	0
53	Eriocoelum kerstingii	0.00301	0	0	0	0	0	0	0	0	0	0	0
54	Erythrophleum ivorense	0	0	0	0	0.020818	0	0	0.01444	0.059173	0.021163	0.031426	0
55	Funtumia africana	0.029551	0	0	0.021951	0.053689	0	0.027141	0	0	0	0	0
56	Funtumia elastica	0.017142	0	0	0.004864	0.022345	0	0.019174	0	0	0	0	0
57	Garcinia kola	0	0	0	0	0	0.044557	0	0	0	0	0	0
58	Gilbertiodendron limba	0	0	0	0	0	0	0	0	0.020763	0	0	0
59	Gilbertiodendron preussii	0	0	0	0	0.017181	0	0	0	0	0.024963	0	0
60	Guibourtia ehie	0	0	0	0	0.015931	0	0	0	0	0	0	0
61	Homalium le-testui	0	0	0	0.006576	0	0	0	0	0	0	0	0

62	<i>Irvingia gabonensis</i>	0.00427	0	0	0.006413	0.022719	0.02608	0.008402	0	0	0	0	0
63	<i>Ixora laxiflora</i>	0.013347	0	0	0	0	0	0	0	0	0	0	0
64	<i>Khaya grandifoliola</i>	0	0	0	0.011206	0	0	0	0	0	0	0	0
65	<i>Klainedoxa gabonensis</i>	0.020785	0	0	0.027006	0.018852	0.036951	0.009681	0.013927	0.074757	0.06923	0.063596	0.040678
66	<i>Lophira alata</i>	0	0.097069	0	0.01406	0.023366	0.046357	0.018425	0.02562	0.017312	0	0.032064	0.042687
67	<i>Lovoa trichilioides</i>	0	0	0	0.005497	0	0	0	0.027024	0	0.022076	0	0
68	<i>Macaranga hurifolia</i>	0	0	0	0.007398	0	0	0	0	0	0	0	0
69	<i>Maesobotrya barteri</i>	0.06133	0	0	0	0	0	0	0	0	0	0	0
70	<i>Mammea africana</i>	0	0	0	0.023407	0.046672	0.08581	0.008156	0.0125	0	0	0	0
71	<i>Maranthes aubrevillei</i>	0	0	0	0.007485	0	0	0	0	0	0	0	0
72	<i>Mareya micrantha</i>	0.003448	0	0	0.003286	0	0	0	0	0	0	0	0
73	<i>Margaritaria discoidea</i>	0	0	0	0.00365	0	0	0	0	0.016422	0	0	0
74	<i>Microdesmis keayana</i>	0	0	0	0.006217	0	0	0	0	0	0	0	0

75	<i>Milicia excelsa</i>	0	0	0	0	0	0	0	0.011627	0	0	0	0
76	<i>Mitragyna ledermannii</i>	0	0	0	0	0	0.043214	0	0	0	0	0	0
77	<i>Musanga cecropioides</i>	0.036946	0	0	0.005577	0	0	0	0	0	0	0	0
78	<i>Myrianthus libericus</i>	0	0	0	0.010466	0	0	0	0	0	0	0	0
79	<i>Napoleonaea vogelii</i>	0.045325	0	0	0.013655	0	0	0	0	0	0	0	0
80	<i>Nauclea diderrichii</i>	0	0.048928	0	0	0	0	0	0	0	0.07642	0	0.041539
81	<i>Newtonia aubrevillei</i>	0	0	0	0.003318	0	0	0	0	0	0.025021	0	0
82	<i>Newtonia griffoniana</i>	0	0	0	0	0	0	0.00726	0	0	0	0	0
83	<i>Octoknema borealis</i>	0.042339	0	0	0.039471	0.059543	0	0	0	0	0	0	0
84	<i>Oldfieldia africana</i>	0	0	0	0	0	0	0	0	0	0.02452	0.031142	0.034913
85	<i>Ongokea gore</i>	0	0	0	0	0	0.044468	0.009238	0	0	0	0	0
86	<i>Parinari congensis</i>	0	0	0	0.012976	0	0.034058	0.009931	0	0.020521	0.04604	0	0
87	<i>Parinari excelsa</i>	0	0.071985	0	0	0	0.03674	0	0.039393	0.068316	0.098091	0	0.120265
88	<i>Parkia bicolor</i>	0	0	0	0.025517	0.023652	0	0	0.012941	0.061434	0.024113	0	0.085317

89	<i>Pentaclethra macrophylla</i>	0	0	0	0	0	0.04365	0.009384	0	0.018906	0	0.03109	0
90	<i>Pentadesma butyracea</i>	0.063301	0	0	0.046866	0	0.205156	0.024829	0.026178	0.021533	0	0	0
91	<i>Piptadeniastrum africanum</i>	0	0.052155	0	0	0	0	0	0	0	0.021034	0	0
92	<i>Protomegabaria stapfiana</i>	0.070367	0	0	0.041016	0.149302	0.112967	0	0	0	0	0	0
93	<i>Pterocarpus santalinoides</i>	0	0	0	0	0.016416	0	0	0.010776	0	0	0	0
94	<i>Pterygota bequaertii</i>	0	0	0	0.004887	0.013752	0	0	0	0	0	0	0
95	<i>Pterygota macrocarpa</i>	0	0	0	0	0	0	0	0	0.019043	0	0	0
96	<i>Ptychopetalum anceps</i>	0.001854	0	0	0	0	0	0	0	0	0	0	0
97	<i>Pycnanthus angolensis</i>	0	0	0	0	0	0	0.009931	0	0	0	0	0
98	<i>Quassia undulata</i>	0	0	0	0.010351	0	0	0.008728	0	0	0.023648	0	0
99	<i>Ricinodendron heudelotii</i>	0	0	0	0	0	0	0	0	0.018136	0	0	0
100	<i>Rinorea ilicifolia</i>	0.005508	0	0	0	0	0	0	0	0	0	0	0

101	<i>Sacoglottis gabonensis</i>	0.002358	0.342971	0	0.006876	0	0	0	0.0257	0	0.072833	0.059499	0.077409
102	<i>Samanea dinklagei</i>	0	0	0	0	0	0	0	0	0	0.022499	0	0
103	<i>Santiria trimera</i>	0	0	0	0.021686	0.016416	0	0	0	0	0	0	0
104	<i>Soyauxia grandifolia</i>	0.034911	0	0	0.008746	0	0	0	0	0	0	0	0
105	<i>Sterculia tragacantha</i>	0	0	0	0	0.015015	0	0	0	0	0	0	0
106	<i>Strephonema pseudocola</i>	0.004259	0	0	0.014846	0	0.044776	0.006896	0	0	0	0	0
107	<i>Strombosia pustulata</i>	0	0	0	0.003326	0.03595	0.081722	0.006868	0	0	0	0	0
108	<i>Symphonia globulifera</i>	0	0	0	0.003684	0	0.042329	0	0	0	0	0	0
109	<i>Synsepalum brevipes</i>	0	0	0	0	0.016737	0	0	0.014213	0.015432	0	0	0
110	<i>Tarrietia utilis</i>	0	0	0	0.034827	0.021183	0.10661	0.069958	0.050651	0.125803	0.023176	0	0
111	<i>Terminalia ivorensis</i>	0	0	0	0	0	0	0	0	0	0	0	0.034913
112	<i>Turraea leonensis</i>	0.003796	0	0	0	0	0	0	0	0	0	0	0

113	<i>Uapaca guineensis</i>	0.033922	0	0	0.021541	0	0.040079	0.02393	0	0.036886	0.024172	0	0
114	<i>Uapaca heudelotii</i>	0.023585	0	0	0.008086	0	0	0	0	0	0	0	0
115	<i>Vitex micrantha</i>	0	0	0	0.01335	0	0.026823	0	0	0	0	0	0
116	<i>Vitex rivularis</i>	0.008789	0	0	0	0	0	0	0	0	0	0	0
117	<i>Warneckea guineensis</i>	0	0	0	0.013898	0	0	0	0	0	0	0	0
118	<i>Xylopia acutiflora</i>	0.025795	0	0	0.016486	0	0	0	0	0	0	0	0
119	<i>Xylopia aethiopica</i>	0	0	0	0.040234	0.014234	0.04093	0	0	0	0	0	0
120	<i>Xylopia parviflora</i>	0.049098	0	0	0.007512	0	0	0	0	0	0	0	0
121	<i>Xylopia quintasii</i>	0.016187	0	0	0.005285	0.025936	0.088506	0.007956	0	0	0	0	0
122	<i>Xylopia staudtii</i>	0.019432	0	0	0.045442	0.0533	0.035947	0	0.013039	0	0	0	0

Volume per hectare estimates (m³/ha) for all species grouped according to diameter class (30%-80% forest canopy cover) for the Tonglay Community Forest

No	scientific_name	< 10 cm	>= 100 cm	0	10-19.99 cm	20-29.99 cm	30-39.99 cm	40-49.99 cm	50-59.99 cm	60-69.99 cm	70-79.99 cm	80-89.99 cm	90-99.99 cm
1	Albizia adianthifolia	0	0	0	0	0	0	0	0.729514	0	0	0	0
2	Albizia zygia	0	0	0	0.077193	0	0	0.433661	0	0	0	0	0
3	Androsiphonia adenostegia	0.212646	0	0	0	0	0	0	0	0	0	0	0
4	Annickia polycarpa	0.129884	0	0	0	0	0	0	0	0	0	0	0
5	Anopyxis klaineana	0	0	0	0	0	1.058992	0	0	0	0	0	0
6	Anthocleista vogelii	0.286974	0	0	0	0.368722	0	0	0	0	0	0	0
7	Anthonotha fragrans	0	0	0	0.347033	0.955849	0	0	0.350044	1.014148	1.047196	0	0
8	Anthonotha macrophylla	0	0	0	0.071685	0	0	0	0	0	0	0	0
9	Antrocaryon micraster	0.229992	0	0	0.065884	0	0	0	0	0	0	0	0
10	Baphia pubescens	0	0	0	0	0.674923	0	0	0	0	0	0	0
11	Beilschmiedia mannii	0	0	0	0	0.295805	0	0	0	0	0	0	0

12	<i>Bridelia grandis</i>	0	0	0	0.391798	0	0	0	0	0	0	0	0
13	<i>Bussea occidentalis</i>	0	0	0	0.204002	0.52049	0	0	0.43612	0	0	0	0
14	<i>Calpocalyx aubrevillei</i>	0	0	0	0	0	0	0	0.443841	0.999013	0	0	0
15	<i>Calpocalyx brevibracteatus</i>	0	0	0	0.458256	0.655844	0	0.352534	0	0	0	0	0
16	<i>Canarium schweinfurthii</i>	0	0	0	0	0	0	0.93711	0	0	1.118912	0	0
17	<i>Carapa procera</i>	0.312463	0	0	0	0.880343	0	0	0	0	0	0	0
18	<i>Chidlowia sanguinea</i>	0	0	0	0	0.453662	0	0	0	0	0	0	0
19	<i>Chrysophyllum subnudum</i>	0.048304	0	0	0.034543	0	0	0	0	0	0.935648	0	0
20	<i>Cleistopholis patens</i>	0	0	0	0	0.681425	0	0	0	0	0	0	0
21	<i>Coula edulis</i>	0	0	0	0	0	0	0	0.278941	0	0	0	0
22	<i>Cryptosepalum tetraphyllum</i>	0	0	0	0	0	0	0.327514	0	0	0	0	0
23	<i>Dacryodes klaineana</i>	0	0	0	0	0.958022	0	0	0.43791	0	0	0	0

24	Dialium aubrevillei	0.190287	0	0	0.061049	1.334469	0.904673	0.257004	0	0	0	0	0
25	Dialium dinklagei	0	0	0	0	0.697181	0	0	0	0	0	0	0
26	Dialium guianense	0	0	0	0.083958	0	2.005493	0.511334	0	0	0	0	0
27	Diospyros cooperi	1.419323	0	0	0.279243	0	0	0	0	0	0	0	0
28	Diospyros gabunensis	0.482548	0	0	0.177499	0	0	0	0	0	0	0	0
29	Diospyros sanzaminika	0.2329	0	0	0	0	0	0	0	0	0	0	0
30	Drypetes chevalieri	0.218659	0	0	0	0	0	0	0	0	0	0	0
31	Entandrophragma angolense	0	0	0	0	0	0	0.406003	0	0	0	0	0
32	Erythrophleum ivorense	0	0	0	0	0	0	0	0	0.724884	0	0	0
33	Ficus sur	0	0	0	0	0.355901	0	0	0	0	0	0	0
34	Funtumia africana	0.576171	0	0	0.029348	0	0	0	0	0	0	0	0
35	Funtumia elastica	0	0	0	0	0	1.367685	0	0	0	0	0	0
36	Garcinia afzelii	0.744498	0	0	0	0	0	0	0	0	0	0	0
37	Gardenia imperialis	0	0	0	0.291908	0	0	0	0	0	0	0	0

38	Gilbertiodendron limba	0	0	0	0.411757	0	0	0	0	0	0	0	0
39	Harungana madagascariensis	0	0	0	0.213188	0	0	0	0	0	0	0	0
40	Heisteria parvifolia	0.03091	0	0	0	0	0	0	0	0	0	0	0
41	Ixora laxiflora	0.26032	0	0	0	0	0	0	0	0	0	0	0
42	Klainedoxa gabonensis	0	0	0	0	0	0.567958	0.210035	0	0	0	0	0
43	Lophira alata	0	0	0	0	0	0	0.410154	0.443592	0	1.06186	1.995555	0
44	Macaranga barteri	0	0	0	0.108865	0	0	0	0	0	0	0	0
45	Mareya micrantha	0.561062	0	0	0	0	0	0	0	0	0	0	0
46	Milicia excelsa	0	0	0	0.051758	0	0	0	0	0	0	0	0
47	Millettia lane- poolei	0	0	0	0.054059	0	0	0	0	0	0	0	0
48	Musanga cecropioides	0	0	0	0.220492	0	0	0	0	0	0	0	0
49	Myrianthus arboreus	0	0	0	0	0.52809	0	0	0	0	0	0	0
50	Napoleonaea heudelotii	0.164699	0	0	0	0	0	0	0	0	0	0	0

51	Nauclea diderrichii	0	0	0	0	0	1.740217	0	0.557883	0	0	0	0
52	Newbouldia laevis	0.238932	0	0	0.097354	0	0	0	0	0	0	0	0
53	Newtonia aubrevillei	0	0	0	0	0	0	0	0	1.070863	0	0	0
54	Oldfieldia africana	0	0	0	0	0	0	0	0	0.651408	0	0	2.37821
55	Parinari excelsa	0	0	0	0.396263	0	0	0.858934	0	0	0	1.311161	0
56	Parkia bicolor	0	0	0	0	0	0	0	0	0	0	2.954416	0
57	Pentadesma butyracea	0	0	0	0	0	0	0.347767	0	0	0	0	0
58	Pouchetia africana	0	0	0	0.259924	0	0	0	0	0	0	0	0
59	Protomegabaria stapfiana	0.583726	0	0	0.074909	0	0	0	0	0	0	0	0
60	Pycnanthus angolensis	0	0	0	0.0246	0	0	0	0	0	0	0	0
61	Ricinodendron heudelotii	0	0	0	0	0	0	0	0.897107	0	0	0	0
62	Sterculia tragacantha	0.074264	0	0	0	0	0	0	0	0	0	0	0
63	Strombosia pustulata	0	0	0	0.295482	0	1.897123	0	0	0	0	0	0
64	Tarrietia utilis	0	0	0	0	0	0	1.06452	0.431797	1.278737	0	0	0

65	<i>Terminalia ivorensis</i>	0	0	0	0	0	2.166084	0	0.560198	1.109158	0	0	0
66	<i>Terminalia superba</i>	0	0	0	0	0	0	0	0	1.000188	0	0	0
67	<i>Treculia africana</i>	0.164538	0	0	0	0	0	0	0	0	0	0	0
68	<i>Uapaca guineensis</i>	0	0	0	0.032107	0	0	0	0	0	0	0	0
69	<i>Uapaca heudelotii</i>	0	0	0	0.037971	0	0	0	0	0	0	0	0
70	<i>Warneckea fascicularis</i>	0.909519	0	0	0	0	0	0	0	0	0	0	0
71	<i>Warneckea guineensis</i>	1.223444	0	0	0	0	0	0	0	0	0	0	0
72	<i>Xylia evansii</i>	0	0	0	0	0.411678	0	0	0	0	1.174139	1.507281	0
73	<i>Xylopi aethiopica</i>	0	0	0	0	0	1.626706	0	0	0	0	0	0
74	<i>Xylopi quintasii</i>	0	0	0	0	0.552073	0	0	0	0	0	0	0
75	<i>Zanthoxylum gillettii</i>	0	0	0	0.302575	0.474753	0	0	0	0	0	0	0

Volume per hectare estimates (m³/ha) for all species grouped according to diameter class (80%-100% forest canopy cover) for the Tonglay Community Forest

No	scientific_name	< 10 cm	>= 100 cm	0	10-19.99 cm	20-29.99 cm	30-39.99 cm	40-49.99 cm	50-59.99 cm	60-69.99 cm	70-79.99 cm	80-89.99 cm	90-99.99 cm
1	Afzelia bella	0	0	0	0	0	0	0	0	0	0	0.425152	0
2	Albizia adianthifolia	0.002596	0	0	0	0	0	0	0	0	0	0	0
3	Albizia zygia	0.025161	0	0	0.054575	0	0.55787	0	0.332802	0	0	0	0
4	Allanblackia parviflora	0.009221	0	0	0	0	0	0	0	0	0	0	0
5	Alstonia boonei	0	0	0	0	0	0	0	0	0	0	0	0.573918
6	Amphimas pterocarpoides	0	0	0	0.010267	0	0	0	0.315469	0	0	0	0
7	Androsiphonia adenostegia	0.023361	0	0	0	0	0	0	0	0	0	0	0
8	Annickia polycarpa	0	0	0	0.092644	0	0	0	0	0	0	0	0
9	Anopyxis klaineana	0	0	0	0	0	0	0	0.437623	0	0	0	0
10	Anthonotha crassifolia	0	0	0	0.128974	0	0	0	0	0	0	0	0
11	Anthonotha fragrans	0.005366	0	0	0.017268	0.070304	0	0.102933	0.386276	0.198997	0.350274	0	0

12	<i>Anthonotha macrophylla</i>	0.017532	0	0	0.18622	0	0.248297	0	0	0	0	0	0
13	<i>Antiaris toxicaria</i>	0	0	0	0	0	0	0	0	0	0	0.842437	0
14	<i>Aubrevillea platycarpa</i>	0	0	0	0	0	0.096638	0	0.240459	0	0	0	0
15	<i>Beilschmiedia mannii</i>	0	0	0	0.103376	0	0.299623	0.089658	0	0.079705	0	0	0
16	<i>Berlinia confusa</i>	0	0	0	0	0	0	0.150635	0	0	0	0	0
17	<i>Bertiera spicata</i>	0.007936	0	0	0	0	0	0	0	0	0	0	0
18	<i>Bombax buonopozense</i>	0	0	0	0	0	0	0	0.238886	0.498363	0	0.526068	0
19	<i>Bridelia grandis</i>	0.018611	0	0	0	0.090997	0	0.073934	0	0	0	0	0
20	<i>Bussea occidentalis</i>	0	0	0	0.106903	0	0.992527	0.614624	0	0	0	0	0
21	<i>Caloncoba brevipes</i>	0.014013	0	0	0.081026	0	0	0	0	0	0	0	0
22	<i>Caloncoba echinata</i>	0.054147	0	0	0	0	0	0	0	0	0	0	0
23	<i>Calpocalyx aubrevillei</i>	0.195908	0	0	0.103802	0.33058	0.966319	0.287718	0.388087	0.272602	0.354775	0	0.49281

24	Campylospermum amplexans	0.020122	0	0	0	0	0	0	0	0	0	0	0
25	Campylospermum duparquetianum	0.042819	0	0	0	0	0	0	0	0	0	0	0
26	Campylospermum reticulatum	0.004072	0	0	0	0	0	0	0	0	0	0	0
27	Canarium schweinfurthii	0	0	0	0	0	0	0.167325	0.515334	0	0	0.348855	0
28	Carapa procera	0.383021	0	0	1.374418	1.12379	0.542175	0.083044	0	0	0	0	0
29	Celtis adolfi-friderici	0.16366	0	0	0.029332	0	0	0	0	0	0	0	0
30	Chidlowia sanguinea	0	0	0	0	0.071017	0	0.198936	0	0	0	0	0
31	Chrysophyllum africanum	0.007167	0	0	0	0.166272	0.350028	0.063251	0	0.20015	0	0	0
32	Chrysophyllum albidum	0	0	0	0	0	0.326261	0	0	0	0	0	0
33	Chrysophyllum perpulchrum	0	0	0	0	0	0	0.186594	0.130215	0	0	0	0

34	<i>Chrysophyllum subnudum</i>	0	0	0	0	0	0	0.118359	0	0	0	0	0
35	<i>Cola buntingii</i>	0.09096	0	0	0	0	0	0	0	0	0	0	0
36	<i>Cola lateritia</i>	0	0	0	0.038317	0	0	0	0	0	0	0	0
37	<i>Coula edulis</i>	0	0	0	0	0	0	0	0	0	0.184653	0	0
38	<i>Cryptosepalum tetraphyllum</i>	0	0	0	0.065316	0	0	0.086539	0	0	0	0	0
39	<i>Dacryodes klaineana</i>	0.115198	0	0	0.108114	0	0.875461	0.175102	0.187103	0	0	0	0
40	<i>Daniellia ogea</i>	0	0	0	0	0.278582	0	0	0	0	0	0	0
41	<i>Daniellia thurifera</i>	0	0	0	0.027814	0.096622	0	0.106445	0.2631	0	0	0	0
42	<i>Dialium aubrevillei</i>	0.143321	0	0	0.158507	0.726963	2.317513	0.754598	0.535939	0.394419	0	0	0.385182
43	<i>Dialium dinklagei</i>	0	0	0	0	0.11016	0.196599	0.078772	0.355873	0	0	0	0
44	<i>Didelotia idae</i>	0	0	0	0	0	0.436518	0.073626	0	0	0	0	0
45	<i>Diospyros canaliculata</i>	0.033766	0	0	0	0	0	0	0	0	0	0	0
46	<i>Diospyros chevalieri</i>	0.060253	0	0	0.045441	0	0	0	0	0	0	0	0
47	<i>Diospyros cooperi</i>	0.349813	0	0	0.102856	0.060451	0	0	0	0	0	0	0

48	Diospyros gabunensis	0.411497	0	0	0.018657	0	0	0	0	0	0	0	0
49	Diospyros sanzaminika	0.101431	0	0	0.527316	0.314022	1.344703	0.061718	0	0	0	0	0
50	Diospyros vignei	0.025909	0	0	0.018719	0	0	0	0	0	0	0	0
51	Drypetes aubrevillei	0.014224	0	0	0	0	0	0	0	0	0	0	0
52	Drypetes chevalieri	0.095004	0	0	0	0	0	0	0	0	0	0	0
53	Eriocoelum kerstingii	0.004743	0	0	0	0	0	0	0	0	0	0	0
54	Erythrophleum ivorense	0	0	0	0	0.24919	0	0	0.072122	0.543387	0.208667	0.486734	0
55	Funtumia africana	0.176228	0	0	0.112637	0.427208	0	0.328831	0	0	0	0	0
56	Funtumia elastica	0.071474	0	0	0.024263	0.230457	0	0.264639	0	0	0	0	0
57	Garcinia kola	0	0	0	0	0	0.294229	0	0	0	0	0	0
58	Gilbertiodendron limba	0	0	0	0	0	0	0	0	0.302416	0	0	0
59	Gilbertiodendron preussii	0	0	0	0	0.101859	0	0	0	0	0.426656	0	0
60	Guibourtia ehie	0	0	0	0	0.116575	0	0	0	0	0	0	0
61	Homalium le-testui	0	0	0	0.033434	0	0	0	0	0	0	0	0

62	<i>Irvingia gabonensis</i>	0.025373	0	0	0.034845	0.316086	0.223827	0.101036	0	0	0	0	0
63	<i>Ixora laxiflora</i>	0.032727	0	0	0	0	0	0	0	0	0	0	0
64	<i>Khaya grandifoliola</i>	0	0	0	0.091702	0	0	0	0	0	0	0	0
65	<i>Klainedoxa gabonensis</i>	0.044556	0	0	0.117008	0.138582	0.379009	0.1535	0.125625	0.731175	0.851908	0.781613	0.505394
66	<i>Lophira alata</i>	0	1.788253	0	0.095326	0.135831	0.235927	0.154569	0.394654	0.190552	0	0.631363	0.835866
67	<i>Lovoa trichilioides</i>	0	0	0	0.012827	0	0	0	0.321775	0	0.282884	0	0
68	<i>Macaranga hurifolia</i>	0	0	0	0.029873	0	0	0	0	0	0	0	0
69	<i>Maesobotrya barteri</i>	0.242203	0	0	0	0	0	0	0	0	0	0	0
70	<i>Mammea africana</i>	0	0	0	0.117584	0.352905	0.900915	0.09577	0.156136	0	0	0	0
71	<i>Maranthes aubrevillei</i>	0	0	0	0.060562	0	0	0	0	0	0	0	0
72	<i>Mareya micrantha</i>	0.006576	0	0	0.015628	0	0	0	0	0	0	0	0
73	<i>Margaritaria discoidea</i>	0	0	0	0.020199	0	0	0	0	0.180481	0	0	0
74	<i>Microdesmis keayana</i>	0	0	0	0.033228	0	0	0	0	0	0	0	0

75	<i>Milicia excelsa</i>	0	0	0	0	0	0	0	0.145836	0	0	0	0
76	<i>Mitragyna ledermannii</i>	0	0	0	0	0	0.452744	0	0	0	0	0	0
77	<i>Musanga cecropioides</i>	0.080171	0	0	0.011888	0	0	0	0	0	0	0	0
78	<i>Myrianthus libericus</i>	0	0	0	0.042595	0	0	0	0	0	0	0	0
79	<i>Napoleonaea vogelii</i>	0.136948	0	0	0.077485	0	0	0	0	0	0	0	0
80	<i>Nauclea diderrichii</i>	0	0.580216	0	0	0	0	0	0	0	1.130431	0	0.874254
81	<i>Newtonia aubrevillei</i>	0	0	0	0.013905	0	0	0	0	0	0.37757	0	0
82	<i>Newtonia griffoniana</i>	0	0	0	0	0	0	0.046502	0	0	0	0	0
83	<i>Octoknema borealis</i>	0.111743	0	0	0.186335	0.356541	0	0	0	0	0	0	0
84	<i>Oldfieldia africana</i>	0	0	0	0	0	0	0	0	0	0.301874	0.611293	0.675096
85	<i>Ongokea gore</i>	0	0	0	0	0	0.846958	0.069973	0	0	0	0	0
86	<i>Parinari congensis</i>	0	0	0	0.070673	0	0.25168	0.11436	0	0.331008	0.753088	0	0
87	<i>Parinari excelsa</i>	0	1.510905	0	0	0	0.459216	0	0.458682	0.823484	1.473272	0	1.751683
88	<i>Parkia bicolor</i>	0	0	0	0.147312	0.086304	0	0	0.196752	1.008974	0.250083	0	1.158785

89	<i>Pentaclethra macrophylla</i>	0	0	0	0	0	0.590326	0.128902	0	0.301951	0	0.366556	0
90	<i>Pentadesma butyracea</i>	0.210424	0	0	0.233349	0	2.045447	0.300682	0.356095	0.257259	0	0	0
91	<i>Piptadeniastrum africanum</i>	0	0.955861	0	0	0	0	0	0	0	0.359149	0	0
92	<i>Protomegabaria stapfiana</i>	0.207227	0	0	0.199475	1.00848	0.960503	0	0	0	0	0	0
93	<i>Pterocarpus santalinoides</i>	0	0	0	0	0.086728	0	0	0.089416	0	0	0	0
94	<i>Pterygota bequaertii</i>	0	0	0	0.021955	0.085853	0	0	0	0	0	0	0
95	<i>Pterygota macrocarpa</i>	0	0	0	0	0	0	0	0	0.217433	0	0	0
96	<i>Ptychopetalum anceps</i>	0.003526	0	0	0	0	0	0	0	0	0	0	0
97	<i>Pycnanthus angolensis</i>	0	0	0	0	0	0	0.182028	0	0	0	0	0
98	<i>Quassia undulata</i>	0	0	0	0.048514	0	0	0.097548	0	0	0.301294	0	0
99	<i>Ricinodendron heudelotii</i>	0	0	0	0	0	0	0	0	0.289212	0	0	0
100	<i>Rinorea ilicifolia</i>	0.011736	0	0	0	0	0	0	0	0	0	0	0

101	<i>Sacoglottis gabonensis</i>	0.003741	5.503294	0	0.031127	0	0	0	0.231508	0	1.382753	0.957192	0.953285
102	<i>Samanea dinklagei</i>	0	0	0	0	0	0	0	0	0	0.282735	0	0
103	<i>Santiria trimera</i>	0	0	0	0.114191	0.122506	0	0	0	0	0	0	0
104	<i>Soyauxia grandifolia</i>	0.108797	0	0	0.081795	0	0	0	0	0	0	0	0
105	<i>Sterculia tragacantha</i>	0	0	0	0	0.119931	0	0	0	0	0	0	0
106	<i>Strephonema pseudocola</i>	0.014197	0	0	0.108891	0	0.701828	0.095806	0	0	0	0	0
107	<i>Strombosia pustulata</i>	0	0	0	0.012329	0.296242	1.009098	0.068811	0	0	0	0	0
108	<i>Symphonia globulifera</i>	0	0	0	0.026874	0	0.329219	0	0	0	0	0	0
109	<i>Synsepalum brevipes</i>	0	0	0	0	0.141364	0	0	0.275438	0.191097	0	0	0
110	<i>Tarrietia utilis</i>	0	0	0	0.194675	0.164562	0.846559	0.681362	0.48142	1.202833	0.214608	0	0
111	<i>Terminalia ivorensis</i>	0	0	0	0	0	0	0	0	0	0	0	0.599079
112	<i>Turraea leonensis</i>	0.008523	0	0	0	0	0	0	0	0	0	0	0

113	Uapaca guineensis	0.123206	0	0	0.07791	0	0.267124	0.265176	0	0.524638	0.474561	0	0
114	Uapaca heudelotii	0.183316	0	0	0.064047	0	0	0	0	0	0	0	0
115	Vitex micrantha	0	0	0	0.077775	0	0.144601	0	0	0	0	0	0
116	Vitex rivularis	0.033461	0	0	0	0	0	0	0	0	0	0	0
117	Warneckea guineensis	0	0	0	0.098351	0	0	0	0	0	0	0	0
118	Xylopia acutiflora	0.057461	0	0	0.06374	0	0	0	0	0	0	0	0
119	Xylopia aethiopica	0	0	0	0.187168	0.081888	0.526138	0	0	0	0	0	0
120	Xylopia parviflora	0.160218	0	0	0.04657	0	0	0	0	0	0	0	0
121	Xylopia quintasii	0.057557	0	0	0.028468	0.325637	0.745063	0.126114	0	0	0	0	0
122	Xylopia staudtii	0.039512	0	0	0.162243	0.269358	0.229865	0	0.139162	0	0	0	0

Species list for fauna in the Tonglay Community Forest

Taxonomic group	Scientific_name	Common name	IUCN	Family
Mammals	<i>Loxodonta africana</i>	African forest elephant	Critically Endangered	Elephantidae
	<i>Potamochoerus porcus</i>	Red River hog	Least Concern	Suidae
	<i>Cephalophus sp.</i>	Jentink duiker	NE	Bovidae
	<i>Funisciurus pyrropus</i>	Fire-footed rope squirrel	Least Concern	Sciuridae
	<i>Cercocebus atys</i>	Sooty mangabey	Vulnerable	Cercopithecidae
	<i>Cercopithecus campbelli</i>	Campbell monkey	Near Threaten	Cercopithecidae
	<i>Protoxerus stangeri</i>	African Giant Squirrel	Least Concern	Sciuridae
	<i>Tragelaphus scriptus</i>	Bushbuck	Least Concern	Bovidae
	<i>Xerus inauris</i>	Tree squirrel	Least Concern	Sciuridae
	<i>Philantomba maxwellii</i>	Duiker/Deer	Least Concern	Bovidae
	<i>Syncerus Caffer</i>	African Buffalo	NE	Bovidae
Birds	<i>Malimbus ballmanni</i>	Gola malimbe	Near Threaten	Ploceidae
	<i>Buceros bicornis</i>	Hornbill	Vulnerable	Bucerotidae
	<i>Ceratogymna elata</i>	Yellow casqued hornbill	Vulnerable	Bucerotidae
	<i>Criniger olivaceus</i>	Yellow-bearded greenbul	Vulnerable	Pycnonotidae
	<i>Gypohierax angolensis</i>	Palm-nut Vulture	Least Concern	Accipitridae
	<i>Oriolus brachyrynchus</i>	Western Black-headed Oriole	Least Concern	Oriolidae
	<i>Corythaeola cristata</i>	Malachite Kingfisher	Least Concern	Musophagidae
	<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	Least Concern	Alcedinidae
	<i>Nicator chloris</i>	Western nicator	Least Concern	Pycnonotidae
	<i>Hedydipna collaris</i>	Collared Sunbird	Least Concern	Nectariniidae
	<i>Cyanomitra olivacea</i>	Olive sunbird	Least Concern	Nectariniidae
	<i>Dicrurus modestus</i>	Vivet-mantled Drongo	Least Concern	Dicruridae
	<i>Dicrurus modestus</i>	African Emerald Cuckoo	Least Concern	Dicruridae
	<i>Cuculus solitarius</i>	Red-chested Cuckoo	Least Concern	Cuculidae
	<i>Pogoniulus atroflavus</i>	Red-rumped Tinkerbird	Least Concern	Lybiidae
	<i>Pogoniulus chrysoconus</i>	Yellow-fronted tinkerbird	Least Concern	Lybiidae
	<i>Coracina azurea</i>	Blue Cuckooshrike	Least Concern	Campephagidae
	<i>Pogoniulus subsulphureus</i>	Yellow-throated tinkerbird	Least Concern	Lybiidae
	<i>Polyboroides typus</i>	African Harrier-hawk	Least Concern	Accipitridae
	<i>Gypohierax angolensis</i>	Palm-nut Vulture	Least Concern	Accipitridae
	<i>Ceratogymna elata</i>	Yellow casqued hornbill	Vulnerable	Bucerotidae
<i>Chrysococcyx cupreus</i>	Cuckoos	Least Concern	Cuculidae	
Amphibian	<i>Hyperolius chlorosteus</i>		NE	Hyperoliidae

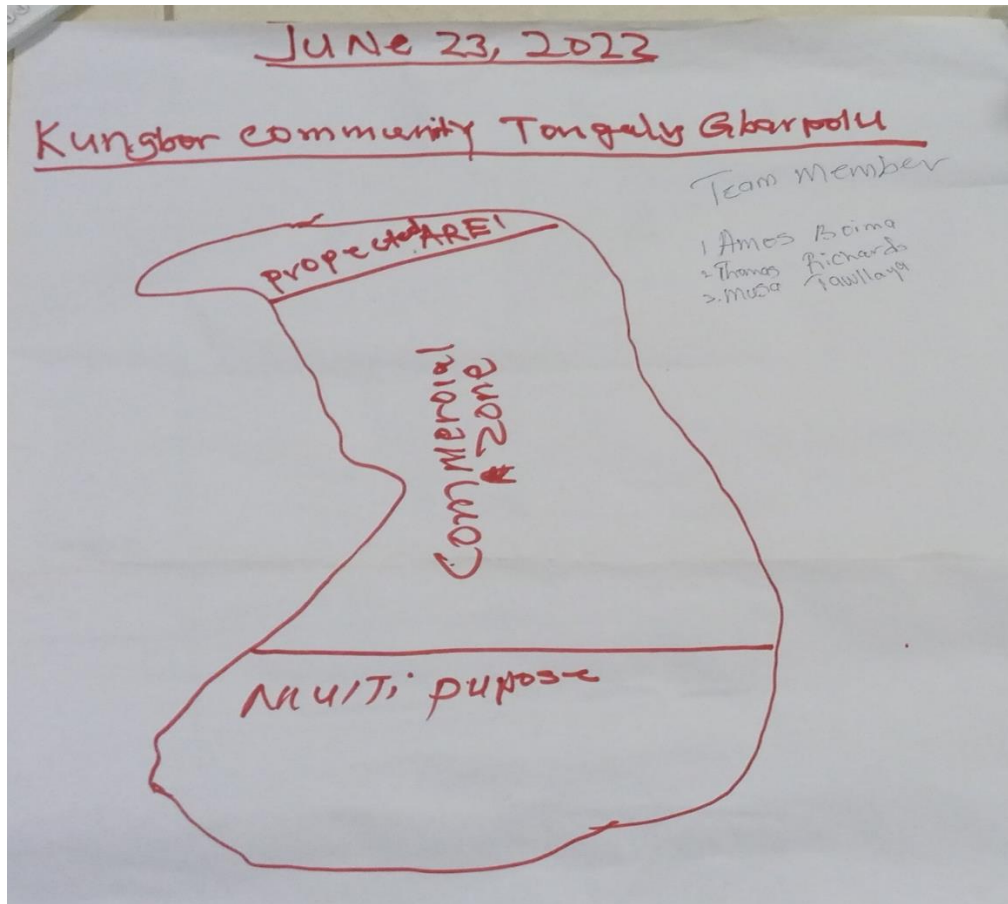
Non Timber Forest Products list & usages in the Tonglay Community Forest

NTFP Name	NTFP Usage
Alchornea	Cherry fruit (Food)
Alcohnia cordifolia	Construction
Bitter root	Construction and furniture
Bush cherry	Food and medicinal
Bussea occidentalis	For basket, mat, furniture, tying etc
Canarium	Fruits used for food
Chromolaena odorata	Furniture
Cola lateratia	It is use as cough medicine
Cola edulis	It is use for folder.
Costus dubius	It is use for tying and furniture
Dacryoides klaineina	It is use for tying, basket, mat, furniture etc
Dialum aubrevelli	Latex used for candles
Diospyros Chevelerii	Leaves use for the clotting of blood when wounded.
Elaeis guineensis	Looks like modern cherry and is edible. It presence attracts animals when it is ripe.
Funtumia africana	Medicinal
Heriteria utilis	Medicinal (bark used to treat cold.
Laccosperma acutflorum	Medicinal (leaves and barks are used to treat illnesses.
Laccosperma spp	Medicinal (leaves and stems are used to treat cough)
Lacosperma opacum	Medicinal (leaves and stems)
Macrodesma klaineina	Medicinal (leaves)
Maesobotrya barteri	Medicinal (the leaves)
Manniophyton fluvum	Medicine, yellow jaundice food fruit
Mapania lindri	Nutritional
Marantochloa congensis	Nutritional (fruits are spicy)
Massularia acuminata	Nutritional (leaves and fruits are edible)
Monkey pod	Nutritional (seeds are edible)
Musanga	Nutritional and furniture.
Myrianthus liberica	Nutritional and medicinal
Napoleonia heudelotti	Nutritional and medicinal.
Parinari	Oil palm production, construction, palm butter, furniture
Parkia	Palm wine, construction, furniture
Parkia bicolor	Seeds used as spice for food and medicine
Pentadesma butyracea	Seeds used for fishing
Protomegabaria stafiana	Seeds used for food
Raphia hookeri	Stomach pain medicine
Rattan	Use for furniture, tying, basket etc
Rhcinodendron heudelotti	Use for tying, furniture, basket making etc.
Sacoglottis gabunensis	Used as furniture
Termococcus sp.	Used for furniture

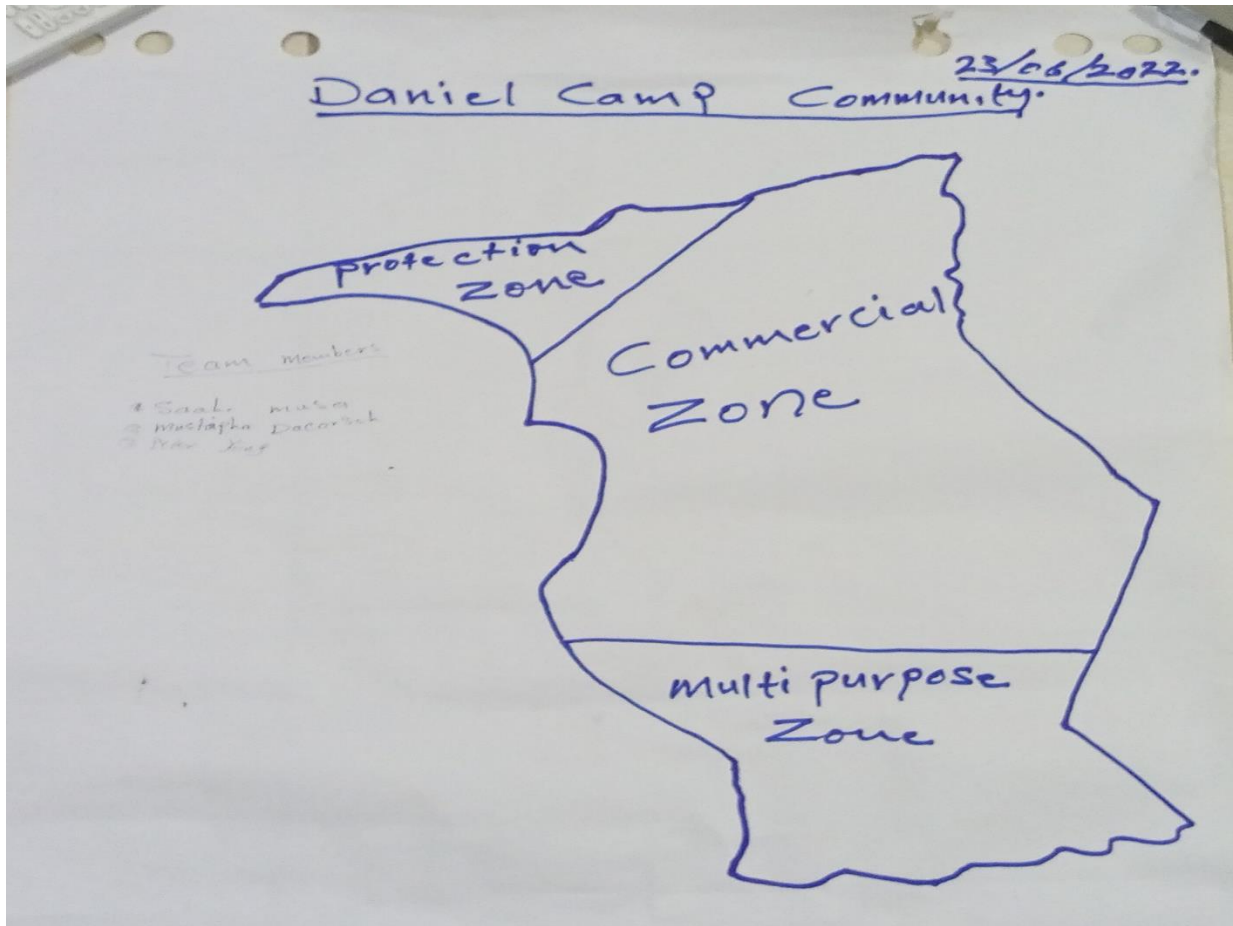
Uapaca	Used for tieing
Vitex micrantha	Used for tieing and furniture
Xylopi aethiopica	Used to make furniture
Xylopi parviflora	Used to produce furniture
Zanthicyllum gilletti	Nutritional

Annex 5.8 Relevant portions of the Socio-Economic Survey and Resource Reconnaissance (SESRR)

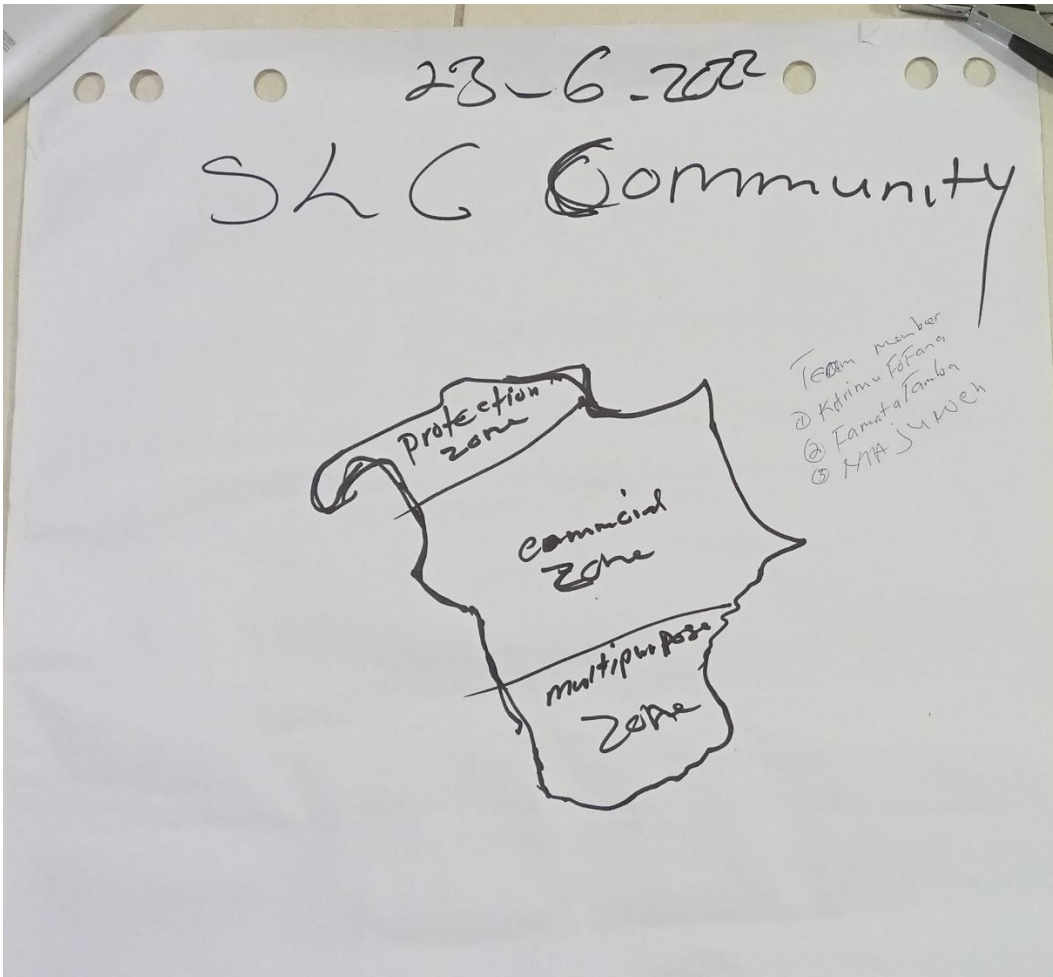
Annex 5.9 Documentary evidence that the participatory process was complied with (signing sheets of meetings, sketch drawings of maps, earlier versions of maps, inventory data, etc.); Survey team members



Zonation map drawn by Kungboh community



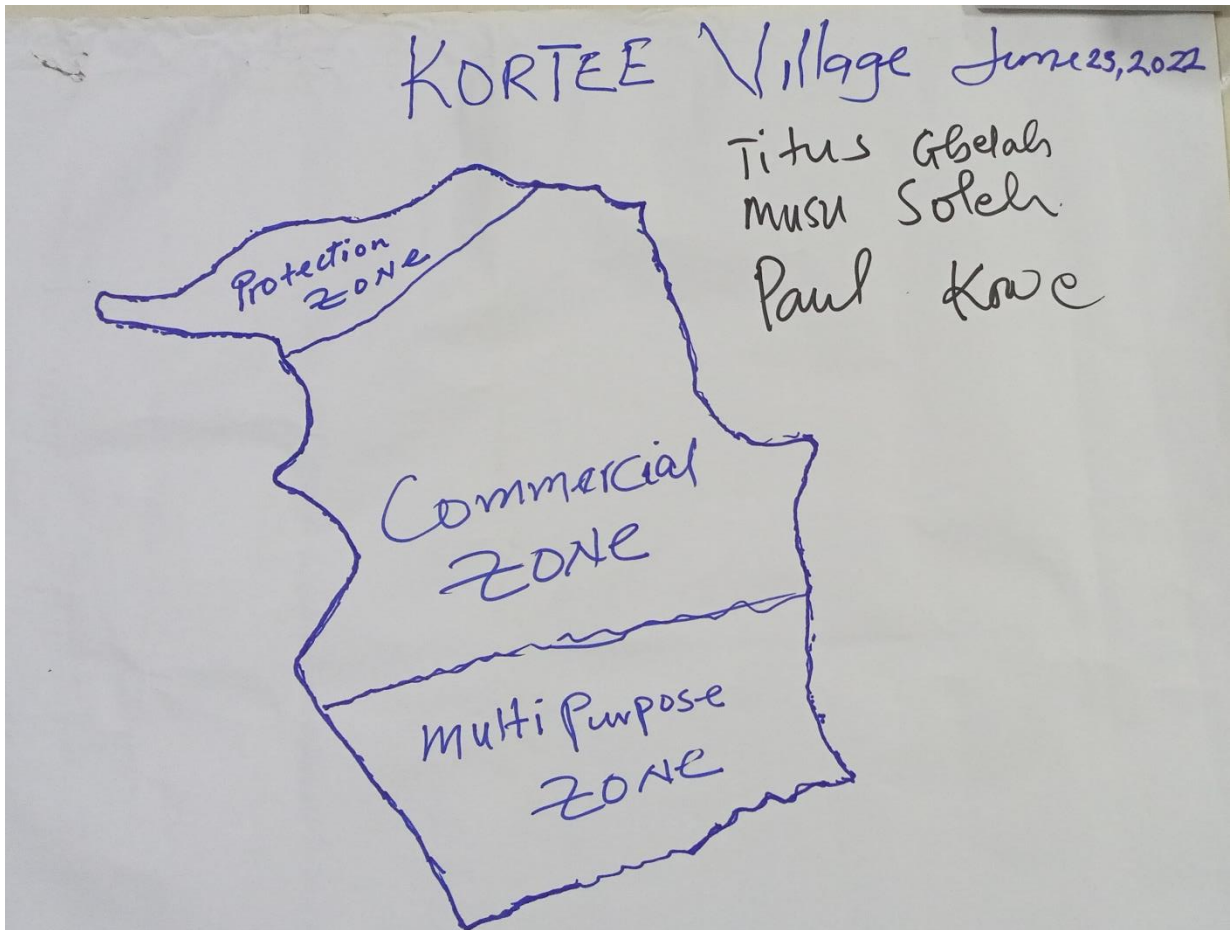
Zonation map drawn by Daniel Camp community



Zonation map drawn by SLC community



Zonation map drawn by Tonglay community



Zonation map drawn by Korte Village community

23/6/2022

Camp Alpha

Team M
Jeebatel
Kofe
Jusu



Zonation map drawn by Camp Alpha community

Annex 5.10 A copy of any agreement signed with a third party, for either commercial or conservation purposes.

Focal Community (Central town/village): Kungbor

Source: Socio-economic report. FDA, 2019

Rules, Taboos and Penalties: List at most five (5) activities with special rules in your community; what are the likely penalties?