

PRIVATE SECTOR INVESTMENT INCENTIVES FOR BIOMASS PRODUCTION: CASE OF NFA

PRESENTED BY

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WEDNESDAY 7TH OCTOBER 2020

During the National dissemination and policy engagement workshop on identification of practical incentives for advancing sustainable Biomass Energy Production within Central Forest Reserves and Forest Landscapes in Uganda.

Organized by Environmental Alert in partnership with financial support from Norad within the framework of the project titled, *'Increasing access to sustainable and renewable energy alternatives in the Albertine Graben'* that is implemented by WWF-Uganda Country Office."





OUTLINE OF THE PRESENTATION

- **Introduction**
 - About NFA and Uganda
 - Biomass production and demand
- **Incentives for biomass production**
- **Challenges and bottlenecks**
- **Recommendations**

ABOUT NFA

Established under Section 52 of NFTP A 2003:

- Develop and manage all CFRs;
- Promote innovative approaches for local community participation;
- Establish procedures for the sustainable utilisation of Uganda's forest resources by and for the benefit of the people of Uganda.

Vision: A world-class, leader in sustainable forestry management.

Mission: "To sustainably manage and develop the country's CFR resources, and provide quality forestry products and services for socio-economic development of Uganda.

Funding: Government of Uganda, Development Partners - UNHRC, USAID, INBAR, Corporate bodies including Banks and NGOs.

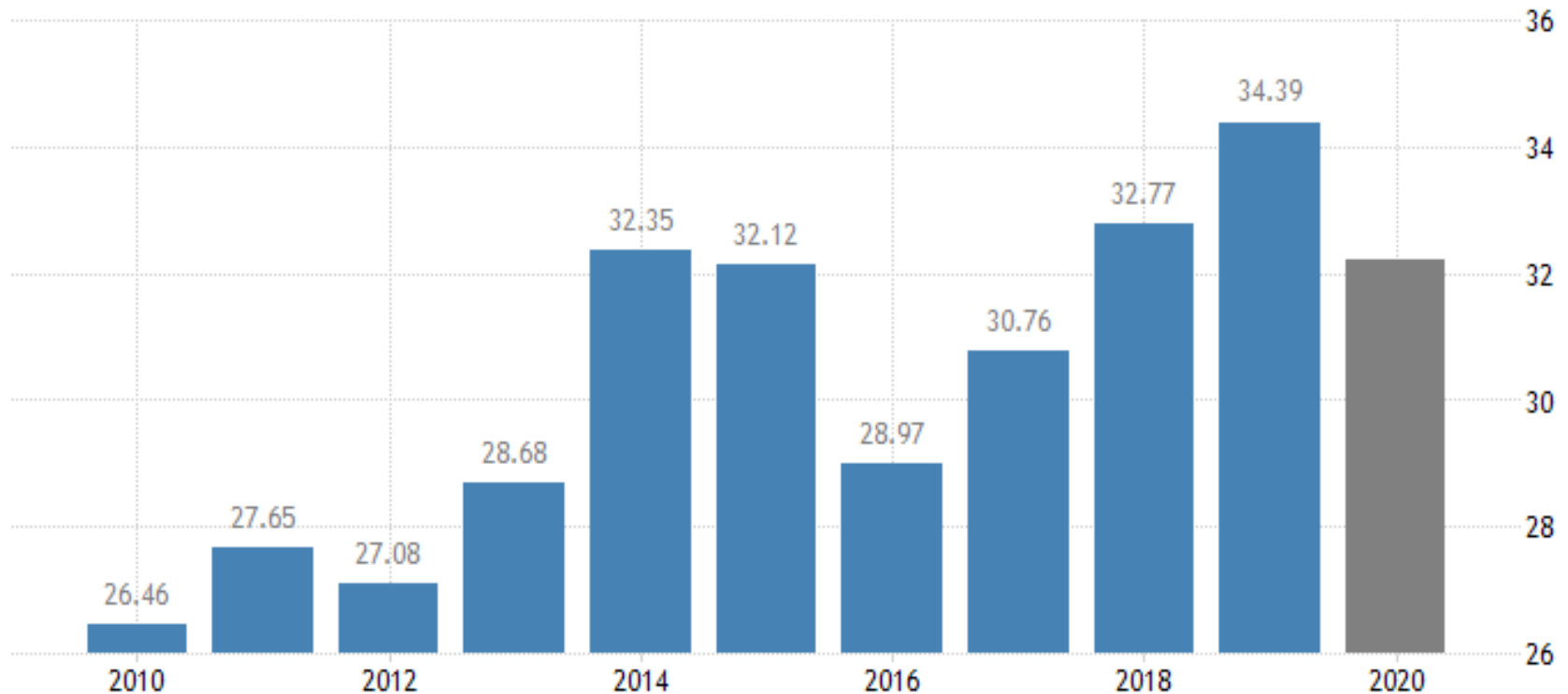
UGANDA (UN DATA 2020)



Source: GoU - Uganda Government

- Population (2020) – 46 million
- Pop. growth - 3.2%
- Real GDP growth (2017) – 5.5%
- Forest cover 1900 – 53%
- Forest cover 2015 – 15%
- Forest cover 2020 – 12.4%.
- Wood fuel >80% domestic energy
- Population density - 229 per Km² (593 people per mi²).
- Land area 199,810Km²
- **25.7 %** urban population (11,775,012)
- **Median age 16.7 years.**

UGANDA GDP US\$ Bn



SOURCE: TRADINGECONOMICS.COM | WORLD BANK

BIOMASS PRODUCTION AND DEMAND

- Quality and sustainable biomass production is still in its infancy stage in Uganda (Nabanyumya 2016).
- Natural Forest resources are disappearing rapidly (State of the World Forests Report 2020). For Uganda loss is over 120,000/yr.
- Demand for quality biomass energy and timber products from investors in and out of CFRs remains high.

NET LOSS OF FOREST COVER 1990-2017 (IN HECTARES)

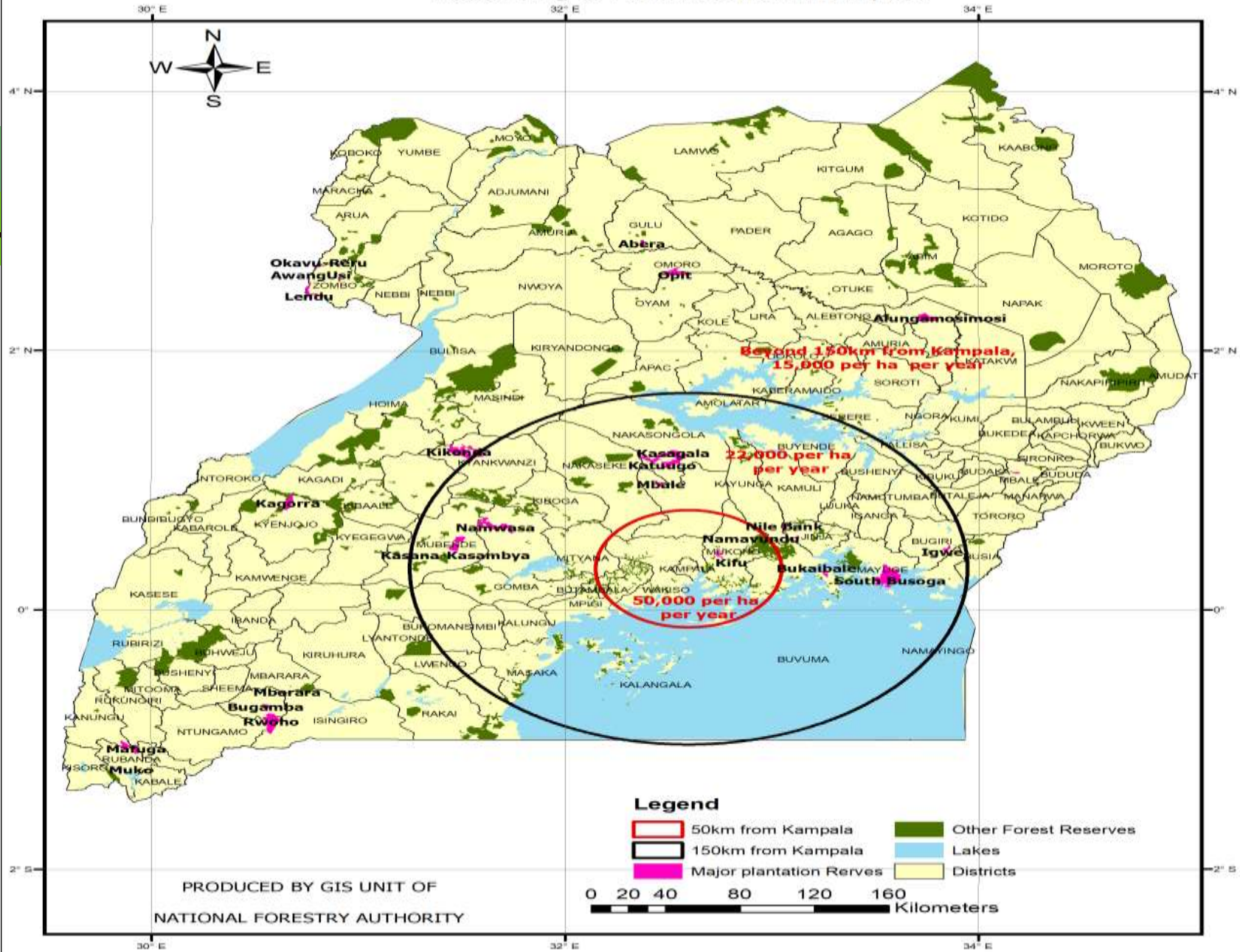
	Forest Type	1990	2000	2005	2010	2015	2017	Relative forest cover change
Private	THF well stocked	174,006	146,211	80,034	53,325	34,064	31,475	-82%
	THF degraded	176,014	178,097	153,049	64,542	39,732	39,270	-78%
	Woodland	2,963,088	2,025,737	1,836,577	705,493	646,412	608,368	-79%
	Plantation	12,738	7,198	11,727	18,970	45,443	88,551	595%
	Subtotal	3,325,846	2,357,243	2,081,388	842,330	765,651	767,664	-77%
Protected	THF well stocked	477,104	557,719	520,923	455,058	495,059	492,654	3%
	THF degraded	97,048	48,454	38,645	42,438	62,132	62,861	-35%
	Woodland	1,011,420	809,004	941,421	585,346	566,526	630,635	-38%
	Plantation	22,328	14,144	21,799	30,890	62,280	71,378	220%
	Subtotal	1,607,900	1,429,321	1,522,788	1,113,731	1,185,997	1,257,528	-22%
Total	4,933,746	3,786,564	3,604,176	1,956,061	1,951,648	2,025,192	-59%	
	% of total land area	24%	18%	18%	9%	9%	10%	-58%
	National land area* (ha)	20,465,745	20,474,456	20,448,859	20,866,959	20,405,768	20,409,730	<i>Source: NFA internal data</i>

DIRECT INCENTIVES

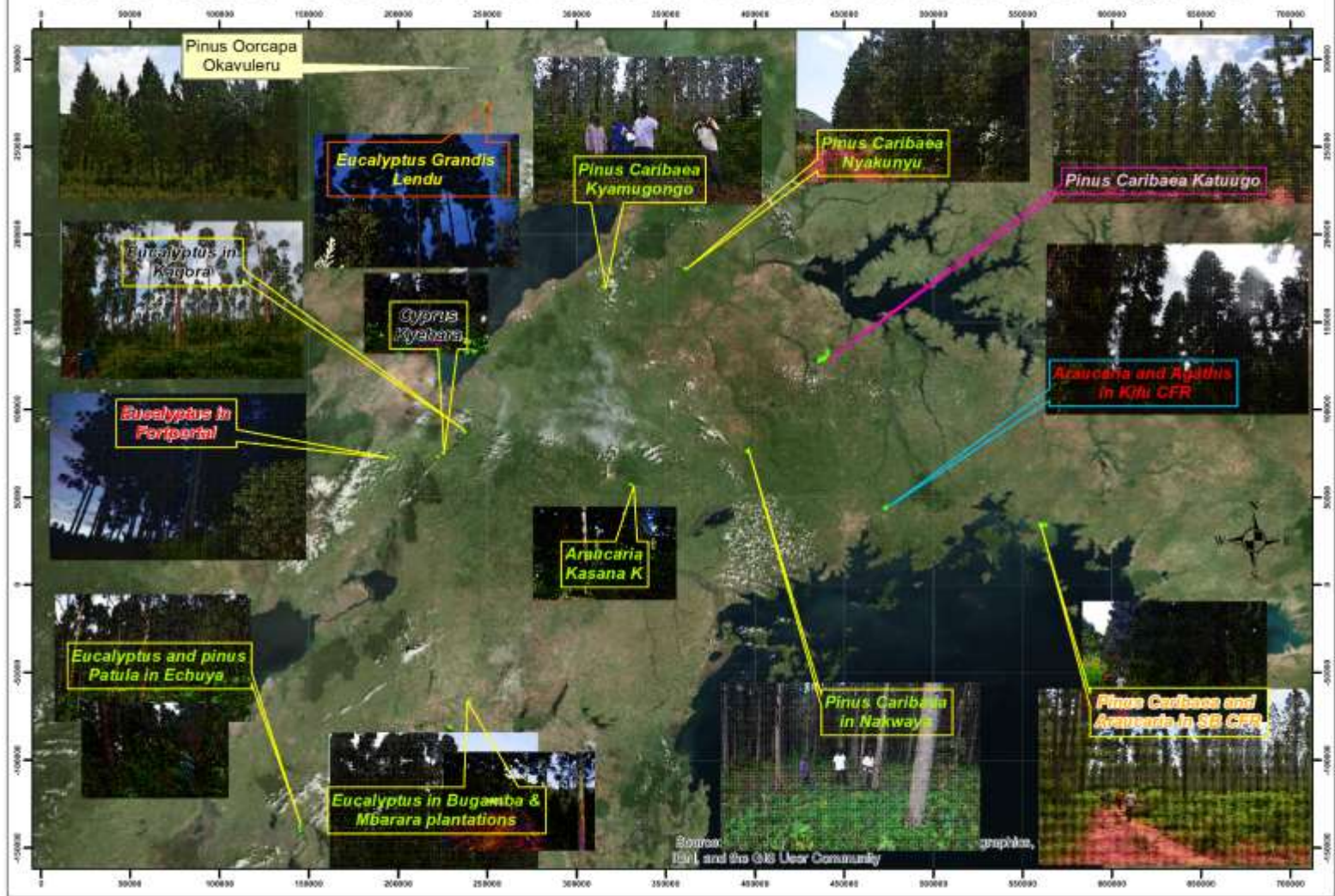
- Land licensing and allocation through CFM agreements for biomass production below market rate (UGX 70,000 - 100,000):
 - a. 50 Km radius @ UGX 50,000;
 - b. 50 – 150Km radius UGX 22,000/ha/yr.
 - c. >150Km radius at UGX 15,000/ha/yr.

- Quality seed and seedlings (*Eucalyptus- grandis* and *camaldulensis*, bamboo, *Pinus Caribeae*, native species like *Maesopsis* (*Musizi*)).

Land Rent Rates in Central Forest Reserves According to Distance from Kampala



Seed Stand Overview in Central Forest Reserves of Uganda



....INDIRECT INCENTIVES

Provision of extension services:

- CFR land marking;
- Construct access roads.



...INDIRECT INCENTIVES

- Carbon credits in Rwoho-Bugamba CFR;
- Technical advice in the field and through published guides, data and information on site and species matching:
 - Guidelines on poles management;
 - Pest management;
 - Tending;
 - Fire management.

INCENTIVES HAVE LED TO 4594 LICENSED PRIVATE SECTOR TREE PLANTERS

No.	Area	Category	No. of Licensees	Area planted	Area licensed	Percentage planted
1	1-99	Small	4,026	29,322	54,113	54%
2	100-499	Medium	503	34,067	49,891	68%
3	500 – 10,000	Large	65	30,782	89,225	34%
	Total		4,594	94,169	193,229	49%

NFA PLANTATION MANAGEMENT AREAS

Location	Area
1. Lendu	2,083
2. Opit	298
3. Mafuga	2,258
4. Mbarara	2,858
5. Katuugo	502
6. South Busoga	1,657
Total	11,156



Fort Portal Seed of *Eucalyptus grandis*

NFA TIMBER PLANTATIONS BY AGE CLASS & AREA

Age Class (Years)	Area (Ha)
0-3	5,000
4-7	300
8-11	100
12-15	5,656
16-19	100
20+	0.5
Total	11,156



CHALLENGES AND BOTTLENECKS TO ADVANCING INCENTIVES

1. **Cost of investment is high, and yet it is required up front.** UGX 1.5 - 3 million/Ha for the 1st three years for site preparation, quality inputs (seeds, seedlings), planting, tending and protection (risks of fire, pests), technical/expert advice.
2. **Commercial biomass production (for fuel wood, charcoal etc.) is economically not viable due to the illegal trade, unsustainable timber harvesting** are a threat to long-term, sustainable business opportunities.
3. **Lack of reliable information in really time** - poor data/information dissemination/knowledge sharing and lack of local expertise: There is a lack of awareness and information on biomass production and supply value chain.
4. **Lack standards on biomass products** – harvesting young and poor/high quality logs.

FACTORS AFFECTING LONG-TERM GLOBAL DEMAND FOR BIOMASS (FOREST) PRODUCTS (source: UN FAO)

- ❑ **Demographic changes:** 7.8 billion (2020), 8.5Bn (2030) and 9.7Bn (2050). Driven by pop. growth in developing countries (UN, 2020).
- ❑ **Continued economic growth:** Projected to grow to US\$100 trillion by 2030. (to grow 5.8% in 2021), **World Economic Outlook June 2020**).
- ❑ **Environmental policies and regulations:** More natural forests will be excluded from biomass wood production.
- ❑ **Energy policies:** Increased use of wood biomass increasingly encouraged.
- ❑ **Plantation forests** as the major source of biomass wood supply.
- ❑ **Technological developments-** Increased plantation productivity (through tree improvement, reduced wood requirements owing to expanded recycling, higher recovery, wider use of new composite products and production of cellulosic biofuel

WIDER USE OF NEW COMPOSITE PRODUCTS



Source: Tetris L and D-Kuru - Own work, CC BY-SA 3.0 at, <https://commons.wikimedia.org/w/index.php?curid=6187400>

INCREASED PLANTATION PRODUCTIVITY



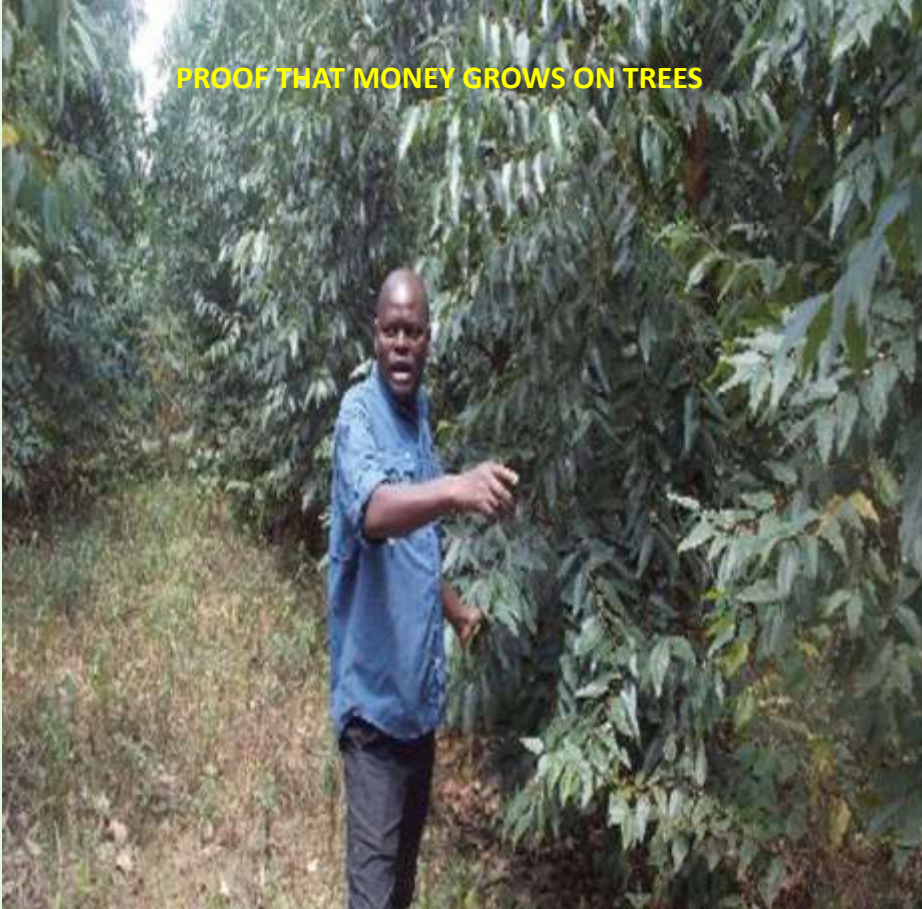
Source: <https://www.woodbusiness.ca/2020-global-lumber-markets-outlook/2020>

RECOMMENDATIONS TO ENHANCE ACCESS TO INCENTIVES UNDER NFA

1. **Set Standards/International standards and regulate the illegal trade in biomass products, poles/fuel, wood, charcoal, etc.**
2. **Strengthening Forest Law Enforcement** and governance through professional investigation and prosecution of environmental and forestry crimes, and strengthen the policing to protect forests against illegal activities.
3. **Continue the support under Community Tree Planting Project (CTPP)** for sustainable tree planting - to increase forest cover from the current 12.4% to 18% by 2020 - 2025.
4. **Awareness-raising and expert information sharing on** the available options (inputs, timber values, legal procedure, financial returns, risks).

FORESTRY FOR WEALTH CREATION AND PROSPERITY

PROOF THAT MONEY GROWS ON TREES



Echuya Forest Reserve NFA 2020

Daily Monitor 14 Aug. 2020. Photo. Michael J Ssali

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END

QUESTIONS ?