

## Sawlog Production Grant Scheme, Phase III Newsletter

January - June 2020, Issue #8







Foreword — — — — — — — — — — — — — — — — — — —	3
FAO support to commercial forestry—	4
Building forestry technical skills; FAO supports training in Forest	
Engineering ————————————————————————————————————	6
The role of forest engineering in Uganda's forestry industry	8
Profile: Busoga Forestry Company ————————————————————————————————————	10
Government of Uganda, FAO commemorate International Day of Forests —	13
Supporting communities and institutions in tree planting ————————————————————————————————————	15
Effects of COVID -19 on the forestry sector: Perspective of a commercial	
forestry company	16
Building nutrition-sensitive Non Wood Forest Products' value chains ———	19
World Bank, FAO launch report on Forest Resource Degradation in	
Refugee- Hosting Areas ————————————————————————————————————	21
Trainees from EU Development Cooperation tour Uganda; visit SPGS	
project beneficiary to learn more about forestry in Uganda ———————————————————————————————————	22
Nursery and seed update	24
Review: State of the World's Forests 2020 Report —	26
Afzelia africana – a valuable tree species yet vulnerable to extinction ———	27
Opinion: Climate change chipping away at the world's forests daily	29



Cover photo: (Left right) Maria Nansikombi, Andrew Akasiibayo-Programme Assistants at FAO and Peter Mulondo-Programme Officer at Uganda Timber Growers' Association during a Forest Engineering training

Editorial Antonio Querido Leonidas Hitimana Agatha Ayebazibwe Zainabu Kakungulu Anita Tibasaaga

Contributors
Andrew McEwan
Anita Tibasaaga
Enver Mapanda
Francis Ssali
Hiroto Mitsugi
Peter Ssekiranda
Vallence Turyamureba

Food and Agriculture
Organization of the United
Nations (FAO)
SPGS III Project Office
Plot 92 Luthuli Avenue, Bugolobi
P.O. Box 521 Kampala
Email: FAO-UG@fao.org
Phone: +256 414 349916/7
www.fao.org

**Disclaimer:** This newsletter was produced with the financial support of the European Union. Its contents are the sole responsibility of FAO and do not necessarily reflect the views of the European Union.



## **Foreword**

Dear Reader,

It is my pleasure to welcome you to this issue of the newsletter of the Sawlog Production Grant Scheme (SPGS) Phase III Project. The whole world is currently gripped by the ongoing COVID-19 pandemic, which has claimed lives, decimated sources of income, strained national health and economic systems and heightened many global challenges. As with all other United Nations agencies, governments and people all over the world, we are quickly adjusting to what is now "the new normal"; with restricted physical interaction, greater use of technology and strict adherence to COVID-19 prevention measures. The momentum of our work at FAO Uganda has indeed been affected in the last few months and activities such as training and provision of technical support to tree farmers slowed down. However, we are making all necessary arrangements to continue supporting our partners and stakeholders in the forestry sector.

We continue to work towards our global call to end hunger and malnutrition world over; a matter of great urgency, for which we need the sustainable use of natural resources like forests. In this issue, you will read about the SPGS Project's interventions towards sustainable forestry, particularly through skills development, knowledge generation and technical support in tree planting, to rural communities and institutions.

In March this year, FAO joined the rest of the global community to celebrate International Day of Forests (IDF), which focused on Forests and Biodiversity. Under the auspices of the SPGS III Project, FAO joined the Government of Uganda and other forestry stakeholders to mark the day, with a 330km walk campaign to raise

awareness on the need to protect forests and other natural resources. Now more than ever, we need to take bold actions to protect forests. This need is emphasized by the State of the World's Forests Report, 2020 that was released in May. The report, which came at a difficult time- during the COVID- 19 pandemic, notes that the degradation and loss of forests could be contributory factors to this public health crisis, disrupting nature's balance and increasing the risk and exposure of people to zoonotic diseases.

Interventions such as SPGS are therefore critical for the sustainability of human activities and management of natural resources. With financial support from the European Union, the SPGS project has provided incentives for commercial forest plantation establishment in Uganda since 2004, adding approximately 80 000 hectares of quality plantations to Uganda's forest estate and creating job opportunities along the forest value chain. Private sector investment and confidence in commercial tree planting has also increased over the years and numerous communities have been supported to establish woodlots in order to reduce their reliance on natural forests for firewood. As we celebrated Europe Day on 9 May this year, we highlighted some of the achievements of this Phase of the SPGS project. You can read more on these milestones in this issue. Special thanks to the European Union. Government of Uganda, private sector growers and everyone contributing to sustainable and profitable forestry in Uganda.

In this Phase of SPGS, FAO is working with stakeholders to support downstream processing of forest products such as timber. This step of the forestry value chain requires human resources with adequate knowledge and skills, appropriate technology and strong partnerships, which FAO is supporting through SPGS III.

In spite of the tumultuous times we are experiencing, FAO is committed to supporting Uganda to achieve its national goals and the Sustainable Development Goals, through sustainable forestry. We are encouraged that FAO is making its contribution through the SPGS III Project.

Happy reading!

Antonio Querido FAO Representative in Uganda

## FAO support to commercial forestry: Key milestones of SPGS Phase III



ince 2004, the European Union has sustained funding for the Sawlog Production Grant Scheme (SPGS)- a unique project to encourage tree planting by the private sector, rural communities and institutions in Uganda. With support from the Ministry of Water and Environment as a partner in the project, FAO is implementing SPGS Phase III (2016 - 2021), building on achievements of the previous phases of the project. By providing grants and technical assistance to private tree farmers and seedlings to communities and institutions, SPGS has contributed to increasing the country's forest cover; with approximately 80 000 hectares (ha) of quality plantations established since its start. In addition to climate change mitigation through intensive afforestation, the project has helped to improve livelihoods by creating jobs for rural communities living around planted forests and enhancing skills of many forestry value chain actors. In commemoration of Europe Day on 9 May 2020, we highlight key milestones of Phase III of the SPGS Project.

## Developing commercial plantations to acceptable national standards

- 362 tree farmers received grants and technical assistance, and planted 25 600 ha of various tree species e.g. Eucalyptus, Pine, Teak, Melia volkensii and Terminalia superba (umbrella tree)
- 200+ communities, including refugees (~6300 members) received 4.5million seedlings and planted over 3 700 ha of community forests.
   35% of the community group leaders are women
- 80 institutions e.g. prisons and schools have been supported with planting material (seedings and cuttings) and planted about 1 500 ha of woodlots. The institutions were trained to enhance their technical skills in managing the trees.
- 130 tree farmers received grants for pruning and thinning of  $\frac{5}{000}$  ha of forests
- About 1 200 stakeholders, including private sector tree farmers, national and local government staff, have been trained in various fields including: Forest establishment and management, Nursery management, Developing bankable business plans and Chain of Custody certification
- In 2019, 100+ commercial tree nursery operators and 25 forest contractors were certified to produce high quality seedlings and to provide forestry services respectively; enabling tree growers to maintain healthy plantations for quality sawlogs and timber.

### Facilitating forestry stakeholders to better perform their mandates

- Supported Nyabyeya Forestry College to incorporate commercial forestry in its curriculum.
   Established a 10 ha demo and a clonal tree nursery at the College to support practical learning.
   The Project assisted 33 students to get internship placement with commercial forest enterprises.
- Through the Forest Sector Support Department of the Ministry and Water and Environment, supported formation of the National Forestry Consultative Forum, to enhance networking of stakeholders and information exchange in forestry sector areas like Commercial forestry, Natural forests, Research and training and Forestry governance
- Through Uganda Timber Growers Association, FAO/SPGS III supported establishment of associations for nursery operators and forest contractors, to enhance members' knowledgesharing, networking, negotiation and advocacy.
- Supported Ministry of Water and Environment and Uganda National Bureau of Standards to develop Uganda's National Timber Grading Standard, as well as plantation management and nursery standards, due for approval as national standards.



#### Integrating applied research along the forestry value chain

- Working with the National Forestry Resources Research Institute (NaFORRI), FAO/SPGS III is conducting field trials for dryland species in Mbarara, Isingiro and Nakasongola districts and Karamoja sub-region. Results will inform evidence-based recommendations for suitable tree species for site conditions in drylands. The introduction of new species for commercial forestry, including indigenous species such as *Melia volkesii*, *Terminalia brownie* and naturalized exotics such as *Gmelina arborea* and *Grevillea robusta* will contribute to promoting species diversity for future afforestation programmes.
- The Project supported review of the Pests and Diseases Management Guidelines, which aims to support tree farmers and other forestry stakeholders to identify and manage pests and diseases in commercial forest plantations. Information generated from this study and review process will help to lay a foundation for establishment of an early-warning national forest pest and disease management system.
- Supported a study to assess the cause of widespread death of pine trees in some parts of Uganda
- In 2018, conducted a study to examine the possibility of acquiring intermediate revenues from resin tapping in Uganda
- Through SPGS III, FAO continues to support the forest research agenda in Uganda, through stakeholder engagement in the Commercial Forestry Research and Training (COMFORT) working group

## Downstream industrialization of processing and utilization of forest products

- The Project carried out studies to estimate available wood resources in Uganda and related appropriate technologies for wood harvesting and processing
- FAO/SPGS III conducted training sessions in Forest harvesting and road planning, Forest Stewardship Council (FSC) Forest Management, Timber Grading, Forest Inventory and International Organization for Standardization (ISO) for timber
- Facilitated discussions on the mode of implementation of downstream processing in Uganda, including financing models, appropriate sawmills, processing and utilization requirements, local and regional market studies, appropriate waste management and occupational health and safety

FAO, the EU and Government of Uganda are committed to working together to support the sustainable impact of joint projects, invest in initiatives that yield long-term results and continue to build on their achievements for the benefit of Uganda.

#EUandUganda | @FAOUganda | www.fao.org/uganda | www.spgs.mwe.go.ug

## Building forestry technical skills; FAO supports training in Forest Engineering



A training participant measures diameter of logs before they are transported to the sawmill

s Uganda's forestry sector continues to grow; with Government, private sector players and communities involved in commercial tree planting, it has become increasingly important to focus on skills development as a mechanism to promote sustainable forest management. Forest engineering is one of the critical skills required for sustainability of commercial forestry. Forest engineering provides the methodology and technology to plan forest operations such as building and maintaining forest roads, harvesting trees, making logs, transporting logs from the forest to the mill, while paying attention to environmental management and health and safety standards. It is against this background that, in February 2020, the FAO/ SPGS III Project organized a Forest Engineering training for key forestry sector players, focusing on Harvesting and Roads.

The two-week training course, held in Kampala and at Busoga Forestry Company (BFC) in Mayuge, aimed at equipping forestry processionals, particularly those involved in harvesting operations, with relevant knowledge and practical skills to work safely, productively and sustainably. The training addressed key performance areas and related harvesting indicators including: conducting hazard identification, risk assessment, determining appropriate control measures and identifying different harvesting systems and methods. Participants

also learnt about costing harvesting operations, criteria for selecting appropriate harvesting systems and developing harvesting plans for strategic, tactical and operational levels.

Since 2004, the SPGS Project has supported planting of about 80 000 hectares of forests; many of which have ongoing harvesting operations and others due for harvesting and processing. It is therefore crucial for forest owners and tree farmers to integrate new, modern and appropriate technologies to improve their operational efficiency.

The training featured theoretical and practical sessions. It was facilitated by Centre for the Modernisation of Operations (CMO)- a South-African based forestry consulting, training and auditing services company, with a global footprint in over 70 countries. Participants included representatives from Ministry of Water and Environment, National Forestry Authority (NFA), Nyabyeya Forestry College, Uganda Timber Growers Association (UTGA), harvesting contractors and forestry companies- Global Woods, BFC and New Forests Company, as well as FAO staff

According to the CMO trainer Andrew McEwan, "with more training opportunities, the human capacity in forestry is going to be big and we shall see more competent forestry personnel. This is a journey and the only way the industry will get ahead is by training more people".

He urged tree farmers to invest in understanding commercial forestry business, taking into account not only costs and productivity, but important values such as access for communities, environmental management, health and safety and social aspects.

"There's too much wood coming onto the market and growers will have to integrate old systems with slightly more modern and appropriate technology sytems in order to sustain their operations while improving productivity, reducing inefficiences and controlling cost of inputs", he said.

McEwan urged training institutions to align their content with the developments in commercial forestry and the market because these teaching insitutions produce the human resources for the industry.

For Ego Dennis- a Logging Supervisor and Trainer at Nyabyeya Forestry College, the Forest Engineering training was beneficial because it helped him to identify the harzards in harvesting, showed him how to produce maps to demarcate special management zones, assess obstacles during harvesting and determine productivity by conducting work studies. "All this is knowledge that I will share with fellow College staff and impart in my students, to make them fit for the industry", he said. Nyabyeya Forestry College is the only educational insitution in Uganda, that offers vocational training in forestry.



Participants carry out work-study to estimate volume of logs a truck can transport from the forest to the sawmill

### In their own words...

#### Moses Otim- Forestry Manager, Global Woods

We used to do costing manually but now, using costing models, we will be able to determine the cost of using a specific machine in our harvesting operations and this will make us more efficient and productive. I am grateful to FAO/SPGS III for organizing this training because previously, different companies were sending a few members of their staff to countries like South Africa to get this knowledge. Here, many more sector players have benefited at a much cheaper cost.

7



Through this training, I learnt about developing harvesting compartment plans and using work study to plan and manage forest operations more productively. These skills will empower me to support the harvesting and sawmilling section of NFA, which will be revived soon. If you start operations poorly, even the output is poor and so this training was very timely.

Genesious Tanzekpe- Forest Supervisor, National Forestry Authority (NFA)- Gulu



Elvis Mulimba (left) and Moses Otim (right) during a didactic session

The training helped me to understand how to avoid delays in getting material for the mill and also assess productivity at the sawmill. I operate seven sawmills, each with diferent capacities. I can now competently make time computation to estimate the volume that each sawmill can produce. Previously, I was doing this through trial and error. Thanks to this training, I am now aware of three potential causes of delay in the sawmilling process: an operator's attitude (when an operator has knowledge and skill but does not want to do the right thing), lack of knowledge (operator does not know the right thing) or lack of skill (operator cannot do the right thing).

Elvis Mulimba- Forest plantation owner and sawmiller

By Anita Tibasaaga- Communications Assistant, FAO

## The role of Forestry Engineering in Uganda's forestry industry

xploitation of forests in the tropics has traditionally used logging (cutting down of trees) and transport systems aimed at minimizing costs as opposed to ensuring sustainability. Given the high value of the timber extracted and the fact that loggers did not incur any costs in growing the trees, logging operations received very little attention in the forestry industry. As a result, the systems used were environmentally destructive, very wasteful and extremely unsafe. Modern forestry however, especially plantation forestry, demands sustainable and well-planned forestry practices that promote safe and efficient harvesting; generally referred to as Forest Engineering. Forest Engineering (FE) is the application of harvesting, roading or creating provision for roads and transport systems that are appropriate to the site conditions of a plantation forest, while also considering societal values such as protecting people and the environment.

Forest Engineering costs can account for 70 percent of the operational budget, with this expense being incurred in only a few days or weeks. The selection of appropriate Forest Engineering systems requires thorough planning (e.g. which compartment to harvest) and happens at different time horizons and at different levels of intensity. Forest Engineering planning also examines markets and societal factors that will influence the general type of systems selected, for a given time such as annually or after five years.

There are many harvesting methods and systems, categorized as 1) full tree (entire tree is processed at roadside), 2) tree length (only the stem is taken to roadside without branches or tops) and 3) cut-to-length (the tree is processed at the stump and logs are transported to roadside). The harvesting system is the primary tool for risk mitigation and fostering sustainability; but since there are so many potential systems, selecting the appropriate one requires expertise and experience.

As forest plantations in Uganda mature, the scale of operations and demand for quality and reliable timber supply will increase. This will necessitate a focus on intermediate technology systems, which will also introduce more management complexity and require improved planning. The fragmented nature of the plantations will require thorough planning. However, many factors, including limited skilled labour and spare parts to keep machine availability high, will curtail the introduction of highly complex mechanized systems. The capital costs for these systems are also very high. It is envisaged that machines such as cable skidders, larger agricultural tractors, mechanized loaders and even some low technology tree felling machines may be introduced over time. Introduction of these technologies will require improved log transport technologies and a vastly improved plantation and public road network.



Harvesting and transporting of logs at a forest plantation. Well-planned forest roads enable efficient transportation and safe operations.

Roads are often grossly neglected in plantation forests as they are often not used year-round. Roads cannot be considered an afterthought when timber needs to be transported or access is needed to fight fires. The road network should ideally be planned during plantation development: taking into account, the future users of the road (for example log transport, fire prevention and suppression, silvicultural activities and public needs). The road network also needs to consider the selected harvesting system as it influences extraction distances and landing locations for tree processing and log storage. An optimal road network creates the correct number of roads of the correct class on the correct location to achieve holistic objectives. Managers need training to implement road maintenance strategies that meet user needs and prevent excessive environmental impacts. Certification programmes such as the Forest Stewardship Council (FSC) correctly place much emphasis on the environmental impacts of forest roads. Mitigation of these impacts calls for hands-on managers with good road planning capabilities.

Without careful planning, Forest Engineering activities can be dangerous and detrimental to workers' health. However, selection of an appropriate FE system, which adopts best practices, can enhance safe operations, ensuring implementation of effective health and safety systems and programmes.

In summary, FE systems should not appear in a haphazard or evolutionary way. FE operations are expensive, carry high safety and health risks and can have a large impact on the environment. FE systems must be identified by experts with knowledge on all

technological aspects and the context of the Ugandan forestry industry. Implementation should be by well-trained managers, with relevant expertise to mitigate the risks. If this is done effectively, the Ugandan forestry industry will be in a position to fully benefit from the successful plantation establishment of the last decade and become a dominant and professional forestry force within the region.

By Andrew McEwan, PhD- Managing Director, International Operations; Forest Engineering consulting and training, CMO South Africa ©FAO/ Anita Tibasaaga

### Profile: Busoga Forestry Company



John Ferguson- Managing Director of Busoga Forestry Company usoga Forestry Company (BFC) is a subsidiary of Green Resources AS (GRAS), a major afforestation company in Africa and wood processor in East Africa. GRAS is among the private companies that is actively combatting climate change by planting new forests and owns 40 000 hectares (ha) of standing forest in Mozambique, Tanzania and Uganda. GRAS also operates one of East Africa's largest sawmill in Tanzania, alongside smaller mills and wood treatment plants in all its plantation areas. BFC's Managing Director, John Ferguson, spoke to us about the company and commercial forestry in Uganda.

#### **Briefly, introduce Busoga Forestry Company**

Busoga Forestry Company or BFC was conceptualized in the early 1990s, as the Uganda afforestation operation of Green Resources- a private Norwegian company. BFC started operations in 1996 with the signing of two 50-year leases to rent part of Bukaleba Central Forest Reserve (CFR) and Kachung CFR in Mayuge and Dokolo Districts respectively. This gave the company approximately 9 000 hectares (ha) and so far, we have established just over 6 200 ha of responsibly managed forest plantations, to generate carbon credits and bio-energy as well as raw materials for manufacturing quality wood products. We planted commercial species such as Pine and Eucalyptus; as well as indigenous timber species such as Musizi (Maesopsis eminii), Terminalia species and Khaya anthotheca (Mahogany species). We intend to plant more of these species in the future.

## Since starting commercial forestry in Uganda, what are some of the key highlights of Busoga Forestry Company?

A major highlight was the first clear felling of Pines in 2017 when the first trees planted in 1997 were about 20 years old. We are now clear felling our first Eucalyptus trees, which we planted in 2008. We are selling these to the rural electrification and distribution agencies in Uganda, as treated utility poles for power distribution lines.

BFC has gone beyond the project stage of its operations and now operates as a commercial entity. Over the years, our business has grown so much that since mid-2018, we no longer receive any financial or other input from our parent company- Green Resources. We generate all the money we spend on planting, machines and labour, from sales. We are very proud of this achievement. BFC also makes significant financial contributions to its parent company to manage some other projects and businesses in Tanzania and Mozambique. We have even paid back some of the capital that was used to start this operation; we now stand on our two feet and are able to make a meaningful contribution to Uganda's economy.

Another highlight for us is the establishment and expansion of the pole treatment plant in Jinja. We upgraded the capacity of our system to produce 70 000 poles per year, up from only 26 000 poles. We are fully utilizing our net capacity and can confidently say we are the biggest pole producer and saw miller in Uganda. We are currently expanding the sawmill to install an additional

sawing line which will increase our sawmill capacity, hopefully up to around 70 cubic meters (m³) of output per day. We sell most of the timber that we produce, on the local Ugandan market and at times, traders from Kenya, Sudan and Dubai buy from us. We hope that with the new developments in our systems and facilities, we shall be able to supply larger quantities of high value products.

Finally, we have been able to maintain the quality of our timber through the Forest Stewardship Council (FSC) certification of our forests. We are currently going through an audit exercise for the Chain of Custody Certification, which will certify that our products are of high quality and are produced from legally sourced wood, which can be sold globally to fetch a higher premium.

### What are some of the challenges you have encountered in your operation in Uganda?

Currently, the projected volume available from our plantations is 110 000 cubic metres (m<sup>3)</sup> of sawn timber per year but we are cutting only 40 000 m<sup>3</sup>. However, we have the capacity to double our production and still ensure sustainability of operations. Getting timber out of Uganda is a challenge due to some restrictions on export of sawn timber and other bureaucracies. To export timber from Uganda, one needs an export license issued by a licensing authority. However, the process of securing the licenses is complex and many times, foreign traders instead come and buy timber from us, which they re-sell in their countries of origin or abroad for much bigger gains. We believe however, that with timber export, taxes levied on the products and the sales made would benefit the economy and people of Uganda. As BFC, we have engaged the relevant authorities and through our association, the Uganda Timber Growers Association (UTGA), we are optimistic that these challenges will be addressed.

### How is BFC supporting the communities living around its plantations?

Supported by our Board of Directors, BFC is implementing an Environmental Social Governance programme through which our parent company expects to spend in excess of USD 122 000 for community development projects in Uganda in 2020. The programme is supporting interventions such as provision of medical supplies, training, supporting village members' projects and road works. We supported residents of Lwanika and Budala villages in Immanyiro Sub-county, Mayuge District with fish feed worth over USD 5 000 to support a fish farming initiative on Lake Victoria. The project was an income

generating activity through cage fish farming. So far, the members have had their first harvest with reported profits of over USD 8 000.

Every quarter, BFC offers medical supplies to Nkombe and Bukatube Level II Health Centers in Mayuge. We also constructed a maternity ward and two children's wards in Bukaleba and Kachung, respectively; helping to expand health facilities in our areas of operation. BFC has so far drilled and constructed three boreholes and protected four water springs in and around Bukaleba.

We want to continue supporting community based projects because the communities are partners in what we do. We want to go beyond giving and actually involve them in our work, to help them understand and appreciate

our business. Our community support activities focus on wealth creation and poverty eradication.

In terms of job creation, depending on the season, BFC employs up to 600 people from the neighbouring villages to provide labour for planting, maintenance and harvesting among other operations.

However, many of the communities surrounding our plantations have few or no opportunities to practise agriculture because they have no land. We are working with the National Forestry Authority (NFA) to work out any possibilities of availing land in the forest reserve to local communities.



A woman from a neighbouring village collects firewood from BFC's plantation in Bukaleba, Mayuge District

©FAO/ Anita Tibasaaga



Treated poles at BFC pole treatment plant in Jinja District



BFC has invested in modern tools, equipment and training to empower its staff



Sawmilling at BFC in Bukaleba, Mayuge District

©FA0

## What elements do you consider critical for the future of commercial forestry in Uganda?

Better regulation of timber markets through developing and enforcing timber standards. Uganda is an awesome country to grow trees and the land is incredibly fertile. Uganda offers a big opportunity to grow quality timber but the industry should be regulated to ensure compliance with standards for timber processing and usage.

The Government of Uganda is considered one of the biggest users of timber in the country and can therefore promote the use of quality timber standards, ensuring that the sources of its timber and poles comply with these. Through the SPGS Project, small to large scale growers have established and maintained high quality plantations that conform to high plantation standards.

Compliance with timber processing standards is also important. If these standards are enforced, timber from both commercial and subsistence tree growers can attract appropriate prices for products and commercial forestry industry will grow. More people will become interested in growing trees. Standards should also be enforced for instance on building sites to ensure that constructors use quality timber and reduce the risk of buildings collapsing as we have witnessed often. We should not compromise on standards.

Commercial forest operations also need support to increase their capacity to process timber and therefore expand their markets. Once the restrictions around exporting timber are lifted, growers should be in position to produce and sell the quality of timber that both domestic and international markets desire.

Government, as a leading infrastructure developer also has the capacity to boost commercial forestry by insisting that the timber used on all government projects and their furnishings is sourced locally and responsibly from registered and certified commercial plantations. This will make commercial forestry a viable and attractive investment and release pressure on illegal logging in natural forests.

## What are BFC's plans for commercial forestry operation in Uganda?

Our target now is to expand into markets that are adopting new ways to use timber for furniture and construction and carbon sequestration. We want to produce high value products- whether kiln dried or treated timber that is worth exporting. We also want to delve into engineered timber products such as cross-laminated timber, laminated beams and ELKA Strong Board (ESB) - a type of plywood that incorporates wood shavings and is commonly used for building houses. This type of wood is cheap to produce, easy to work with. We are also looking forward to FAO's support through SPGS, to co-finance location-based nodes for sawmilling and processing to add value to our timber.

#### How has BFC benefited from the SPGS Project?

The SPGS Project is a valuable part of our business because it provided partial funding and continues to give us technical assistance with our planting operations. We have been able to get quality seedlings, to get training for our staff (often provided by highly experienced consultants) in various subjects like sawmilling, plantation establishment and harvesting.

SPGS is a huge boost to Uganda's commercial forestry. It is a unique intervention; it enables the public and private sectors to work together to uplift forestry in Uganda. The project is of great value because it has supported growers to plant thousands of hectares of trees, which are helping to reduce the carbon footprint and therefore reverse global warming in Uganda. Many people can access firewood and charcoal from planted forests and woodlots instead of encroaching on natural forests.

Through training and exposure visits for growers, SPGS has enabled growers to see and learn from operations in other countries. Through learnings from SPGS and from my own experience working and visiting operations in Indonesia, Swaziland, South Africa, Australia, Canada and New Zealand, we have got new ideas to improve our work. We have brought in new machines, new techniques, which allow us to grow as a company, we are doing things in a more cost effective way and better than we did many years ago. We have an excellent operation.



©FAO/ Anita Tibasaaga

# Government, FAO commemorate International Day of Forests; activists trek 300km to raise awareness on environmental conservation



Hon. Sam Cheptoris (in suit) - Minister of Water and Environment and Hon. Ronald Kibuule (front right) - Minister of State for Water, prepare to flag off the walkers in Mabira Forest. Far left is Leonidas Hitimana- FAO/SPGS III Project Manager

nternational Day of Forests (IDF) is a global event commemorated on 21 March to celebrate and raise awareness about the importance of all types of forests. This year, IDF was celebrated under the theme; "Forests and Biodiversity: Too precious to lose." The motivation of the 2020 IDF theme was to highlight the role of forests in conservation of biodiversity, including a variety of plants, animals and other life supported by the world's forests.

In Uganda, the event was marked by a 330km trek by environment activists starting from Mabira Forest in Central Uganda - to River Rwizi in Mbarara in Western Uganda where they participated in cleaning up the river that has been highly polluted due to human activity.

The choice of Mabira forest as the venue for the celebrations was ideal and in tandem with the IDF 2020 theme. Mabira Forest is among the largest surviving natural forests in Uganda covering over 30 000 hectares (ha). The forest is rich in biodiversity, with more than 300 species of trees, home to over 300 bird species and nine species of primates including the red tailed monkeys and grey-cheeked mangabey.

The ceremony to flag off the 300km trek, led by Uganda Walkers Association, was presided over by the Minister of Water and Environment- Honorable Sam Cheptoris, who commended the local community and partners like FAO for supporting government efforts in promoting conservation and establishment of forests. "Uganda

depends on you to make sure that this forest is left intact," he said. "Without your cooperation and support, this forest would have been destroyed," he added.

Through the SPGS Phase III Project, with funding from the European Union, FAO is providing grants, technical assistance and seedlings to private sector players, institutions and rural communities, to help them establish plantation forests and woodlots countrywide. These are expected to provide alternative sources of wood and energy to reduce pressure on natural forests like Mabira. Since the Project started in 2004, over 70 000 ha have been planted countrywide.

The Minister called upon the public and partners to support Government interventions to save forests and rivers so that they can continue to serve the populace. He expressed his gratitude to the Walkers Association of Uganda, for the initiative to use the platform to raise awareness about the importance of forests, rivers and other natural resources to the livelihoods of many Ugandans.

"We have lost a lot of forest cover; from 24 percent [in 1990] to nine percent [2015] and we have to restore this. Therefore, as they trek, the "Walkers" will plant trees at different stops to increase awareness about challenges in the water and environment sector" Hon. Cheptoris said.

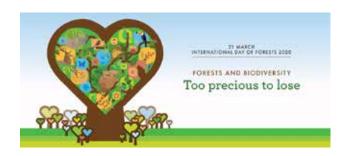
Speaking on behalf of the Executive Director of the National Forestry Authority (NFA), Paul Buyerah Musamali- Director, Policy and Planning at NFA, thanked FAO for supporting development of the State of Uganda's Forests report in 2015, "through which we have seen some positive improvements in the forestry sector, by working together".

He urged the public to embrace fast maturing tree species such as bamboo, which also provide alternatives for fuel wood and can be used to make many other products. For the period 2019-2020, FAO and the Ministry of Water and Environment, certified bamboo nursery operators for the first time. This was in response to growing public interest in the tree species and therefore certification will increase public confidence in sources of quality bamboo.

Leonidas Hitimana- Project Manager of the SPGS III Project, represented the FAO Country Representative. He acknowledged the commitment of the Ministry of Water and Environment towards improving the contribution of forests and other natural resources, to Uganda's development.

"FAO remains committed to working with Government of Uganda to enhance natural resources management", he said. "This year's International Day of Forests is worth celebrating; to acknowledge the many strides made but also recognize the amount of work still required to improve the sector", he added. The IDF celebrations and trek were supported by Vi Agroforestry, Advocates Coalition for Development and Environment (ACODE) and Water Aid.

#### By Anita Tibasaaga- Communications Assistant, FAO





Members of Uganda Walkers Association pose with officials from Ministry of Water and Environment and FAO before starting the 330km trek.



Geoffrey Ayena, Team Leader of Uganda Walkers Association, takes a photo break during the trek, 94km from Mbarara District.



Minister of State for Water, Honourable Ronald Kibuule, plants a tree in Mabira Central Forest Reserve during the International Day of Forests commemoration.

©FAO/ Anita Tibasaaga

## Supporting communities and institutions in tree planting

ne of the core objectives of the FAO/SPGS III Project is to support rural communities and institutions to access inputs, particularly planting material (seedlings and cuttings) and to establish woodlots as sources of income and fuel wood, as well as mitigating climate change. The Project also provides technical assistance in form of training and on-site technical advice to help the beneficiaries establish their woodlots to recommended standards, also empowering them to manage the woodlots effectively for positive results. Institutions such as schools are among the main consumers of wood fuel in Uganda, which they mostly use for daily cooking and heating. Wood energy accounts for about 90 percent of all energy used in the country and according to the Uganda State of Forests report (2016) by the Ministry of Water and Environment, wood energy is expected to be a major source of energy even in the near future.

By end of December 2019, 70 institutions countrywide, including schools and prisons, had received over one

million seedlings of fast-growing tree species (mainly clonal *eucalyptus* and *Gmelina arborea*) and planted 830 hectares (ha) of woodlots. The planted area is a significant contribution to greening the country and providing an alternative source of energy and income for the institutions; including schools and learning institutions, churches, refugee settlements and army barracks. This achievement is despite several challenges faced by the institutions, including limited financial capacity and limited land for tree planting.

By the end of 2020, the FAO/SPGS III Project will have distributed more than 800 000 seedlings to about 200 institutions, with a total planted area of about 1 530 ha against the national project target of 2 500 ha. Of this area, about 200 ha will be dedicated to demowoodlots that will serve as demonstration plots to promote tree planting in the given localities, including refugee settlements. FAO/SPGS III will manage the woodlots for a period of six months and provide technical assistance and training, before handing them to respective beneficiaries.

#### By Vallence Turyamureba, Programme Assistant, FAO



Mr and Mrs Abdullah Kanyike- members of Kalagi Kawututu Community Group in their Eucalyptus plantation in Kalagi village, Nagoje Parish, Mukono District



Stella Apili (wearing orange field vest) demonstrates lining out during a training at Canon Lawrence School in Lira District



Part of the woodlot at Gayaza High School in Wakiso, established by FAO through the SPGS III Project

## Effects of COVID -19 on the forestry sector: Perspective of a commercial forestry company



Operations at the sawmill at global woods AG in Kikonda

the world has been brought to its knees by an invisible beast- one that has affected every aspect of our society- from individuals and families to communities and businesses. First reported on 31 December 2019 from China, COVID-19 disease, caused by a corona virus, has threatened human existence and ravaged world economies. On 11 March 2020, the World Health Organization (WHO) declared COVID-19 a Public Health Emergency of International Concern. WHO issued guidelines to prevent and/or reduce the spread of the disease, including wearing facemasks by anyone with a cold or sneezing and washing hands with water and soap or using alcohol based sanitizer. In Uganda, the first index case was reported on 21 March 2020; three days after the Government closed all educational institutions, places of worship, entertainment centers and banned mass gatheringswith emphasis on social distancing. Next was a ban on public transport and private means transport (except with exceptional permission), encouraging hand washing using soap and water and wearing masks, which is now compulsory when in public.

Many companies in Uganda, including those in forestry, woke up to the new reality of doing business differently. Following is a summary of the experience of global woods AG in dealing with the COVID-19.

Forestry is a practical and field-based profession, with diversified and labor-intensive operations; but we had to make the guided decision to adhere to all recommended precautions. At global woods AG in Kikonda forest, Kyankwanzi district, forestry workers and other plantation-based field personnel, were required to stay at the plantation and not commute from their homes every day, to reduce the risk of spread and importation of COVID-19 infection. However, most labourers do not live on site and therefore an unforeseen cost had to be borne to create accommodation space on farm.

#### Sustaining operations during lockdown

Following the Standard Operating Procedures (SOPs) provided by the Ministry of Health, Global-woods AG developed protocols and procedures to ensure the health and safety of workers during the COVID-19 crisis that was rapidly claiming lives globally. In addition to measures which were already implemented such as, checking of temperature of every worker and visitor, washing of hands with soap or using sanitizers as everyone enters the gate, leaves bathrooms and before meals, social distancing was to be implemented. Among the first quick interventions at global-woods AG, we decongested offices, arranged for staff to have meals in shifts, procured personal protective equipment, among others. Continuing with our operations meant providing our workers with temporary accommodation, food,

toilet and bathing facilities for personnel in nursery, sawmilling, wood chipping, harvesting and contractors on site. This resulted in increased unit cost of all forest operations. Normally, the increase in production cost is pushed to the customer through increased prices of timber and other products; but this was not possible because of the depressed market.

The introduction of a curfew from 7:00pm to 6:30am forced us to abandon the night shift at the sawmill because available lodging facilities could not accommodate two shifts; even if some administrative offices were also turned into dormitories. Soon, the company started witnessing a domino effect as mill production dropped by 50 percent since the night shift was abandoned, followed by failure to fulfil customer orders. The latter resulted in a drop in timber sales to less than 50 percent, exacerbated by low production and difficulties faced by customers (especially the Kenyan traders) to obtain export permits and trucks to transport the timber.

the staff adjusted to new modalities of working from home. Restricted movement of some key staff such as forest guards resulted in reduced protection of the forest, an area of 2,000 hectares (ha), with about 8 500 ha mainly of Pine and Eucalyptus. The suspension on public transport posed a big challenge in obtaining inputs for production and spare parts for machinery and movement of management staff. Given that harvesting and processing machines need preventive maintenance and repairs, the restricted movement made access from Kikonda to service providers hard. Consequently, our operations were affected by low and at times no maintenance and repair of these machines. Unable to use some of the machines, utilization rates dropped to less than 50 percent. The economic impact of COVID-19 is huge if one was to compound the effect on production, sales, lost time and productivity and reduced availability and utilization.

For the workers who had to stay on farm, the daily uninterrupted routine, with operations



European Union envoys during a visit to global woods AG. Such tours and other learning missions were not possible during the lockdown

Social distancing in silviculture and sawmilling operations called for changes in operation procedures, resulting in low production and productivity during the period that workers were learning the new normal work behavior. Constant washing of hands and social distancing, though extremely useful recommendations, resulted in reduction in production and productivity but an increase in cost of purchasing sanitation products. To keep with social distancing requirements, fewer workers had to execute tasks meant for bigger teams, leading to some ergonomic challenges- more physical effort is required from workers to complete given tasks and supervisors to and ensure performance.

When public transport was banned, a team of essential staff was selected to stay at Kikonda while the rest of and ending at specified times, made many to feel overwhelmed and seemingly overworked, especially since they could not return to their homes. The stringent safety measures created a feeling of discomfort for some people and there were signs of stress and anxiety among workers due to prolonged stay away from home, family, and friends. Continuously listening to news of the COVID-19 cases and deaths caused some workers to feel unsafe in a safe environment. Some workers got worried about losing jobs because of the prolonged lockdown. In an effort to reduce stress and anxiety among workers and contractors, more entertainment options were provided in form of get-togethers during weekends, provision of DSTV channels with films to minimize watching news channels and a relaxing centre

Courtesy: European Unior

where workers and contractors could sit and chat after work. In addition, resident managers provided counselling services to workers and contractors.

Although public transport and use of personal vehicles was suspended (except for essential workers), people in the cargo and good transportation remained in operation. Trucks could still transport goods to and from Uganda via the land borders. But after several days of lockdown, truck drivers started to test positive for COVID-19. The number kept growing. The presence of people coming into the farm from the outside, including drivers who were transporting timber, caused some among workers and contractors and in some instances causes some resentment. However, with more confirmed cases of truck drivers and rigorous checks at the borders, fewer drivers came to collect timber. This saw a dip in timber business.

With suspension of non-essential movement, companies or organizations whose operations were considered relevant required movement permits such as stickers or permission letters before using cars on the road. On the management side, the procedure to acquire these permissions to enable managers and supervisors to continue to monitor and assess productivity performance was rigorous and time consuming. In most cases, it was impossible; yet the supervision of forest operations is crucial since forestry is majorly a field operation. Some decisions could not be accurately and competently made remotely since some managers were locked down in Kampala.

However, not all has been gloom and doom. Productivity increased for some operations because camped workers were only focused on their jobs. There was enough interaction time amongst teams. Team building activities like football tournaments, indoor games like chess, draft, scrabble increased bonding among workers. The workers also organized recreational activities such as the 'Eid Cup Football' game between Continental Forests and E& P milling, where the winners slaughtered and roasted a goat. Weekly dinners and goat roasting sessions were introduced to boost the morale of workers. There was enough room for personal reflection, reviews and feedback on the

progress of work, challenges and alternatives.

Management adopted teleworking as a new mode of working and the use of new technology to conduct meetings. The COVID-19 has taught us that it is possible to manage remotely to a greater extent but should not be encouraged. The pandemic is going to change our mode of life, ways of doing business and a new normal is already in the making. Global-woods AG is already adapting to the new normal to keep our valued workers safe and healthy and to defeat COVID-19. Let us continue playing our respective roles to ensure that the gains made so far are not eroded but to continue adapting to live with it.

### About global-woods AG

Global-woods AG is a German-based private company operating in Uganda since 2002. The company has a 50-year tree farming license from the Government of Uganda to establish plantation forests in Kikonda Central Forest Reserve, Kyankwanzi District. Global-woods AG has to date planted about 8 500 hectares (ha), mainly of Pine for saw logs, and Eucalyptus for the transmission pole market. The company employs about 600 workers, including forest contractors and has so far planted. Global-woods AG has been a beneficiary of SPGS since 2004, receiving technical and financial support for commercial forest establishment.

Extremely degraded areas are rehabilitated through planting of Pine or Eucalyptus trees, with about 2 000ha under conservation, making it the largest privately financed conservation areas in the country. Certified by FAO as a five-star commercial tree nursery, global-woods AG's tree nursery provides high quality planting materials for its own plantation establishment, for sale to other growers and distribution to communities interested in planting trees.

By Enver Mapanda- Head of Forestry and Operations, global woods AG



## Building nutrition-sensitive Non Wood Forest Products' value chains through sustainable exploitation and use



Grasshoppers being sold in Arua

ccording to the State of Uganda's Forests Report, 2016, in some parts of Uganda, the value of Non Wood Forest Products (NWFP) is higher than that of wood products, yet they continue to be considered secondary aspects in forest management and land use planning. NWFP are often considered lesser forestry products or "neglected". The State of Uganda's Forests report notes that NWFP are very beneficial to the country; with honey production ranging between 4 000 and 9 000 metric tonnes but with a production potential estimated at 100 000 to 200 000 metric tonnes of honey per year. In 2009, it was reported that apiculture contributed about USD 17 million to the national economy. Whereas the market for honey is considered to be available in Uganda, information is not readily available. Furthermore, millions of households worldwide heavily depend on wild and semi-wild resources from forests and other wooded land for subsistence and/or income. About 80 percent of the population in developing countries use NWFP for health and nutritional needs because they provide an important source of micro and macronutrients. About 1 billion people globally depend on wild foods. NWFP also provide raw materials for large-scale industrial processing. NWFPs are also significant in global trade, and were estimated to have generated USD88 billion in 2011, according to FAO.

To harness the role of NWFP in food and nutrition, and their contribution to incomes of rural households, FAO and the Agroforestry Center (ICRAF) jointly conducted a study to assess opportunities for building nutrition sensitive NWFP value chains. Conducted in the West Nile region of northwestern Uganda, the study aimed at identifying key forest and wild foods with the greatest potential to contribute to nutritious and healthy diets, act as basis of sustainable livelihoods and counter

the degradation of forested and wooded landscapes. NWFP are goods of biological origin other than timber, derived from forests and other wooded lands. NWFP include mushrooms, fruits, nuts, herbs, aromatic plants, game, fibers (used in construction, clothing or handcrafts), resins, gums, saps, and products used for medicinal, cosmetic or cultural symbolism.

In February 2020, a stakeholders' workshop was organized to share key findings from this study. Key study findings and recommendations are summarized below:

- 1. NWFP in West Nile are mainly obtained from tree sources such as fruits and leaves; insect sources such as grasshoppers, bees and white ants (termites); and small plants and mammals from terrestrial and aquatic habitats, including several wild vegetables and medicinal plants.
- 2. Most common NWFP include honey, shea butter, Doodo (Amaranthus dubius), grasshoppers, desert date (*Balanites aegytiaca*), tamarind and winged termites
- 3. Many NWFP have poor regeneration and long maturation periods efforts are needed to ensure adequate supply through sustainable harvest guidelines, protection of vulnerable species (e.g. shea, *Vitellaria paradoxa*) and domestication where appropriate
- 4. Collectors and producers of NWFP have limited training and skills in value chain and production. There's need to enhance training or personnel in the NWFP value chain and production of high-quality products such as honey and wax.
- 5. Value chain improvement of NWFP in west Nile can contribute to improved dietary and nutrient

© FAO/ Giulia Muir

diversity and improved household income

- 6. NWFP as a source of food and household income can advance conservation of natural resources in fragile ecosystems by acting as an incentive to protect forests and wooded lands
- 7. There is need to develop standards for edible insect food production
- 8. Technology for oil extraction is inefficient and does not adhere to basic food standards, especially for balanites oil production
- 9. NWFP are not integrated in forest management plans and plans for refugee settlements

#### Remarks from stakeholders and partners

"The timing is right to emphasize the importance of NWFP. We are prioritizing them as options for alternative cash crop economy and domesticating them to support rural livelihoods and to compensate for losses in land use management. NWFP have high value and potential to contribute to improving rural household incomes and nutrition", said Issa Katwesige, a Senior Forestry Officer at the Forestry Sector Support Department of the Ministry of Water and Environment. He represented the Commissioner of Forestry- Margaret Adata.

"This intervention will contribute to the development agenda of the forestry sector and intermediate commitments of the Uganda Government for household nutrition and economic improvement" Katwesige said. The goal of Uganda's Third National Development Plan (2020/21 – 2024/25) is to Increase household incomes and improve quality of life through "Sustainable Industrialization for inclusive growth, employment and sustainable wealth creation. NWFPs therefore have a role to play."

"The partnership with ICRAF is important to the work FAO is doing to build resilience of refugees and host communities, to shocks such as food insecurity in Arua, Yumbe and Moyo districts in the West Nile region", said FAO Representative in Uganda, Antonio Querido.

"FAO believes that by training rural communities to add value to NWFP, and exposing them to market opportunities for these products, refugees and host communities can increase their income security and nutritional resilience. However, more research and policy guidance are required to improve the value chain for NWFPs, especially those with high market potential "he added.

Through this work, FAO seeks to raise awareness among different sectors (forestry, health, education) about the important contribution NWFP can make to building resilience directly by adding vital nutrients and diversity to diets, and indirectly as the basis of sustainable livelihoods.

FAO also called for integration of NWFP in forest management, land-use planning, nutrition and livelihood interventions because NWFP have the potential to make a greater contribution to nutrition and food security, particularly dietary diversity, as well as increased household income and biodiversity conservation.

According to Clement Okia, the Country Representative at ICRAF, "Unlocking the potential of NWFP value chains requires a multi sectoral approach and the necessary technical inputs". He also urged for development of NWFPs value chains to improve nutrition, income and management of natural forest and tree resources.

Participants at the workshop included state and non-state actors involved in forestry and regulation. These included Office of the Prime Minister, Ministry of Local Government, Nyabyeya Forestry College, National Forestry Resources Research Institute (NaFORRI), Uganda National Bureau of Standards (UNBS), National Forestry Authority (NFA), The Uganda National Apiculture Development Organization (TUNADO), Makerere University and the Ministry of Water and Environment's Forest Sector Support Department (FSSD).



Balanites aegyptica (Desert date) seeds



A girl displays wild lemon or kululu, one of the NWFP

By Anita Tibasaaga- Communications Assistant, FAO

### World Bank, FAO launch report on Forest Resource Degradation in Refugee- Hosting Areas; Call for cooperation in developing sustainable interventions for restoration of forest resources



Bidibidi refugee settlement in Yumbe District, Northwestern Uganda

©FAO/Roberto Salinas

he Food and Agriculture Organization of the United Nations (FAO), together with the World Bank, launched a report on Forest Resource Degradation and Intervention Options in Refugee-Hosting Areas of Northern, Western and Southwestern Uganda. The objective of the study, launched in February 2020, was to assess the environmental impacts of the refugee influx on forest resources in the refugee hosting areas and identify potential intervention options to mitigate pressure on forest resources. Findings of this study are critical in informing intervention strategies to contribute to resilience building of both displaced and host communities and help them to use available natural resources effectively while protecting and restoring the environment. The assessment was jointly conducted by FAO and the Word Bank; with funding from the Government of Norway and the Terrafrica Leveraging Fund.

Results from the assessment indicate that loss of tree cover in the refuge hosting areas is evident as refugee and host communities remain highly dependent on forests and other woodlands as primary sources of wood fuel for cooking and for income generation. With the growing population, there is increased pressure on natural resources further exacerbating deforestation and forest degradation. According to the report, more forest degradation was registered in

hosting communities than in the refugee settlements; particularly in Western and Southwestern Uganda. Key drivers of forest degradation and deforestation in the refugee-hosting areas are expansion of farming, harvesting of forest products mainly for charcoal, firewood and construction materials, and expansion of settlements.

According to Richard Matua, Assistant Commissioner in the Urban Water and Sewerage Services Department, who represented the Permanent Secretary of the Ministry of Water and Environment, at the launch of the report, the Ministry is in advanced stages of implementing a countrywide project to support environmental restoration in the refugee settlements. "As Ministry of Water and Environment, we intend to double our efforts to ensure that all the approvals are obtained to enable implementation", he said. He also presented the Ministry's Refugee Response Plan for Water and Environment Sector, which recognizes the importance of sustainable use of the environment and natural resources through coordinated interventions involving all stakeholders.

The FAO and World Bank assessment comes at a time when ongoing regional instability has led to the forced displacement of more than 1.3 million refugees and asylum seekers to Uganda, mostly from South Sudan, the Democratic Republic of the Congo (DRC), Burundi,

and Somalia, making Uganda the largest refugee host country in Africa and third largest in the world. This has resulted in the establishment or reopening of some of the world's largest refugee settlements. Given the large number of refugees in Uganda and the diverse nature of their impacts on the natural capital of the hosting areas, there is a need to develop comprehensive interventions for sustainable forest resource management and energy access, targeting both refugees and hosts. As part of a durable system of sustainable land management, well-planned forestry interventions.

World Bank Country Manager in Uganda, Tony Thompson, commended Uganda's supportive refugee policy that seeks to empower refugees alongside their hosts and emphasized the timeliness of the reports.

"This work is of strategic importance to both the Government of Uganda and development partners. We have an opportunity to help inform Uganda's third National Development Plan that includes refugees in national development planning and explicitly guides integration of environmental management in all refugee hosting district", he said.

According to Antonio Querido, the FAO Representative in Uganda, "There is urgent need to develop comprehensive interventions for sustainable energy access and forest resource management, targeting both refugees and hosts. These interventions include afforestation, reforestation, restoration and the establishment of market-oriented multi-purpose woodlots that can ensure a sustainable supply of wood fuel, timber, building materials and other non-wood forest products while minimizing detrimental environmental impacts".

"In order to mitigate the risk of irreversible forest degradation, there is a need for actual data on what is actually taking place; reliable actual information is crucial to facilitate implementation of targeted interventions and to create solutions", said Her Excellency Elin Østebø Johansen, Ambassador, Royal Norwegian Embassy in Uganda.

The report launch was attended by a cross section of actors in the refugee and environment space; including government officials, development partners and Non Profit Organizations such as the Office of the Prime Minister, Ministry of Water and Environment, Ministry of Agriculture, Animal Industry and Fisheries, National Forestry Authority, UN High Commissioner for Refugees, Japan International Cooperation Agency, the European Union, Makerere University and World Agroforestry.

## Some key recommendations from the report include:

- Development of agroforestry systems, especially intensive, mixed-use planting on household plots
- 2. Establishment of market-oriented woodlots for building poles, energy, and other products
- 3. Rehabilitation of degraded forests using both natural and assisted regeneration in protected areas and on private and community land
- 4. Restoration and conservation of forests in protected areas by supporting natural regeneration and enrichment planting as well as improving surveying, demarcation, boundary maintenance, fire protection
- 5. Enhancement of energy efficiency through more efficient cooking practices and charcoal production techniques
- Protection of intact natural forests on private and communal land

For more information on the assessments, please access the reports as shown below:

Assessment of Forest Resource Degradation and Intervention Options in Refugee-Hosting Areas of Western and South-western Uganda - http://www.fao.org/3/CA7832EN/CA7832EN.pdf

Rapid Assessment of Natural Resource Degradation in Refugee Impacted Areas in Northern Uganda - http://www.fao.org/3/CA7656EN/CA7656EN.pdf

By Anita Tibasaaga- Communications Assistant, FAO

# Trainees from EU Development Cooperation tour Uganda; visit SPGS project beneficiary to learn more about forestry in Uganda

group of seven trainees from the European Union Development Cooperation Directorate visited one of the large-scale forest plantations in Uganda, to enhance their understanding of commercial forestry for sustainable development and to familiarize themselves with the ongoing development work supported by the EU in Uganda. The group, which was on a seven-day learning tour in February 2020, visited Nile Plywood's plantation in Katugo, Nakasongola district. Nile Ply is one of the beneficiaries of the SPGS Project, receiving technical assistance and grants to plant commercial forests and has established forest plantations in different locations in Uganda. The company has about 10 000 hectares (ha) of land (part Government-owned

and part company land) and plants about 500 ha every year.

During their tour, the trainees- all working in different fields of development (including strategic partnerships, human rights, legal and administration) were briefed about the SPGS project and its contribution to reversing deforestation, reducing pressure on natural forests, mitigating climate change, creating jobs, promoting industrialization, value addition and fostering sustainable development overall. They were introduced to some of the trees identified by the International Union for Conservation of Nature (IUCN) as most endangered indigenous tree species in the



The EU trainees pose with staff of FAO and Nileply Limited at the latter's plantation in Katugo, Nakasongola



Zainab Kakungulu (left)- Training Officer at FAO briefs the trainees about the SPGS Project. In the background is a plantation of Melia volkensii



They also visited Nile Fibreboard- a wood processing plant associated with Nile Plywood, based in Kinoni, Nakasongola district. The company produces

Nile Plywood forest.



Nadia O'Shaughnessy- one of the trainees, plants a tree during the field visit

plywood, block boards, flush doors, particleboards and creosate and treated electricity transmission poles. In Nakasongola, the company is yet to start harvesting from its plantation and currently sources materials for use in the factory from local tree farmers. Furthermore, it employs about 400 people in the forest and 500 people in the factory- creating employment and helping to promote economic activity to empower the local population.

By Anita Tibasaaga- Communications Assistant, FAO

23

## Tree nursery and seed update



Francis Ssali (in khaki vest) guides nursery operators on how to sow Tectona grandis (Teak) seeds in a seedbed during a training for refugee hosting community groups at Palorinya Refugee Settlement in Obongi district

ince the World Health Organization (WHO) declared it a pandemic in March 2020, the corona virus disease or COVID-19 has disrupted nearly every aspect of human life, including forestry. Due to the pandemic and subsequent restrictions on movements put in place by governments, including the Government of Uganda, to curb the spread of the disease, the tree-planting season was affected and most tree farmers were unable to carry out their planned tree planting activities. This in turn affected the tree nursery business; with multiple cancelled orders, postponed bookings, high turnover of workers and low seasonal sales. The FAO/SPGS III Project also had to put a halt to planned tree nursery activities and efforts are underway to carry out these activities in the most feasible way, taking into consideration guidelines from the Ministry of Health. Following is an update on commercial tree nursery support.

**Seed availability:** In the period 2019 to early 2020, Australia had unusually intense bush fires, which destroyed an estimated 18.6 million hectares of forest, including some seed orchards in Queensland. This affected the supply of seed from Australia, for tree planting. The good news however is that the Uganda Timber Growers Association (UTGA) procured about 17 kilogrammes (kg) of Pinus caribaea var. hondurensis (PCH) 2<sup>nd</sup> generation seed orchard (F2) seed from Forest Plantations Queensland (FPQ). This seed was made available in time for sowing for the March/ April 2020 planting season and all interested buyers are urged to book early for coming planting seasons (first come, first served basis). It is difficult to predict the price per kilo due to the fluctuating US dollar rate; but the former is estimated at UGX 4.6M per kg. NB. Australian seed has a very high germination rate of 90

percent (compared with ca. 70 percent from Brazil) and a high number of viable seeds per kg (>48 000 compared to <30 000 from Brazil). UTGA also has in stock,1.6kg of improved and clean seed of *Eucalyptus grandis* from South Africa seed orchards, at UGX 20 000 per gram for members and UGX 32 500 per gram for non-members. For booking, call +256 785 343564 or visit the UTGA office on Plot 116 Bukoto Street, Kamwokya.

Seed can also be procured from the National Forestry Authority (NFA), which has 50 kg of PCH F2 Brazil at UGX 4Million per kg and 400kg of *Eucalyptus grandis* from Fort Portal and Lendu local seed stands at UGX 500 000 per kg. NFA also has stock of Eucalyptus grandis from stands established from South Africa seed at UGX 1Million per kg. For more information, contact the National Tree Seed Centre in Namanve or call 0414-286049.

Commercial certification: tree nursery Certification of commercial tree nurseries remains critical in the forestry value chain; increasing tree farmers' confidence in supply of high quality planting material for profitable forest plantations. However, due to the ongoing COVID-19 pandemic and associated movement restrictions, the FAO/SPGS III project could not carry out the highly anticipated countrywide annual certification audits. Discussions are ongoing to plan certification in light of the "new normal". Interested nurseries should look out for the Call for Expression for certification, to be published in the national daily newspapers and on the FAO/SPGS III website here www.spgs.mwe.go.ug. Also find the list of certified tree nurseries for 2019/2020 on the website.

FAO/SPGS III is currently working with the Forest Sector Support Department (FSSD) at the Ministry of Water and Environment and the Uganda National Bureau of Standards (UNBS) to develop guidelines and standards for national tree nursery certification. FAO is supporting review of the current guidelines and audit checklists as well as expansion of the scope of tree nurseries beyond only commercial tree nurseries. As part of plans to nationalise the tree nursery guidelines, a national validation meeting to review the guidelines was organized in December last year.to receive input from forestry sector stakeholders. A pilot certification exercise will then be conducted together with FSSD technical staff and the District Forestry Officers, to familiarise them with the audit process and empower them to carry out nationwide certification, even after the end of the SPGS project.

The criteria for certification will remain the same, including use seed from approved sources, production of quality planting material, and use of technically, economically, socially and environmentally acceptable production practices to foster production of quality seedlings for profitable forest plantations and woodlots.

#### **Training**

Training of nursery operators and provision of technical assistance are instrumental for nursery business success and ability to produce and supply quality seedlings. During the certification exercise of 2019/2020, nursery operators expressed interest in training in tree nursery management (particularly Teak and Clonal Eucalyptus). Training was planned for 29 March - 3 April (Clonal eucalyptus management training) and 13-16 July 2020 (Teak management training), targeting nursery operators in the Northern and West Nile clusters respectively. However, these trainings were postponed due to the ongoing COVID-19 pandemic. FAO/SPGS III is monitoring the situation and will communicate new dates at an appropriate time. For now, nursery operators and tree farmers are encouraged to adhere to Ministry of Health guidelines: washing hands, wearing facemasks and respecting physical distancing.

By Francis Ssali- Programme Assistant, FAO

### Forest loss slows globally as sustainable management grows

lobally deforestation continues, albeit at a slower rate, with 10 million hectares (ha) a year being converted to other uses since 2015, down from 12 million ha a year in the previous five years, according to the key findings of the Global Forest Resources Assessment 2020 (FRA 2020)- a flagship report by the Food and Agriculture Organization of the United Nations (FAO).

According to the report, released in May 2020, there are 4.06 billion ha of forest, equal to 0.52 ha for each person on Earth. On a net basis, including forest expansions, the world's forest area declined by 4.7 million ha a year since 2010.

Almost a third of the world's land surface is covered by forests, which provide a slew of materials, services, aesthetic comfort and supporting millions of livelihoods.

"It's very welcome to learn that more and more forest areas are subject to long-term management plans, which are essential to achieve Sustainable Development Goal 15," said Maria Helena Semedo, Deputy Director-General, Climate and Natural Resources.

SDG 15 calls for protecting, restoring and promoting the sustainable use of terrestrial ecosystems, that is fostering "life on land". The Global Forest Resources Assessment is an essential component of FAO's custodianship of key SDG 15 indicators as it collects and reports authoritative data on the trends in percentage of forest area and progress on sustainable forest management. Today, 2.05 billion hectares of forests, more than half the total, are subject to management plans.

"The Global Forest Resources Assessment is a comprehensive view of the world's forests and a critical tool in formulating sound policies, practices

and investments," said Mette Wilkie, Director, Forestry Policy and Resources Division.

#### Tangible progress

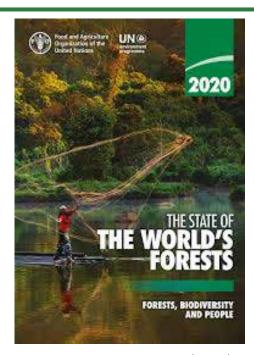
One notable upside captured by the new assessment is that the area of forest in protected areas globally has increased by 191 million hectares since 1990 and now 18 percent of the world's forests are located within protected areas, with South America home to the highest share of these. That means that the world has met and surpassed, for forests, the Aichi Biodiversity Target to protect at least 17 percent of terrestrial area by 2020, said FAO Senior Forestry Officer Anssi Pekkarinen, who coordinated the assessment.

#### Some key findings

- -The world's forest area has shrunk since 1990 by 178 million hectares, roughly the size of Libya.
- -Most forest areas 93 percent of the total consist of naturally regenerating forests, while the remainder is planted.
- -During the last decade, forest area has increased in Asia, Oceania and Europe, while the highest rate of net forest losses were recorded in Africa, followed by South America.
- -Primary forests account for some 1.11 billion ha
- -The share of forests designated primarily for soil and water protection is increasing.
- -Total forest carbon stock is decreasing with declining forest area although the carbon stock density has slightly increased within the last three decades.

fao.org/news/story/en/item/1273924/icode/

### Review: State of the World's Forests 2020 Report



he State of the World's Forests (SOFO) Report is an annual flagship report produced by FAO and for the first time, this year, jointly with the United Nations Environment Programme (UNEP). The report builds on new information generated by FAO's Global Forest Resources Assessment 2020, which analyses the status of protected forests over time, undertaken by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). SOFO 2020 comes at a time when the United Nations Decade on Biodiversity 2011-2020 is ending and countries are preparing to adopt a post-2020 global biodiversity framework. The report also comes during one of the most difficult times in the 21st century, when the world is experiencing devastating effects of COVID-19 pandemic.

It notes that the degradation and loss of forests could be contributory factors to this public health crisis, disrupting nature's balance and increasing the risk and exposure of people to zoonotic diseases.

Forests cover over 30 percent of the global land area and provide habitat for terrestrial plant and animal species. Unfortunately, forests and forest biodiversity are under threat from actions to convert the land to agriculture or unsustainable levels of exploitation, much of it illegal. The report therefore examines the contributions of forests and of the people who use and manage them as well as the conservation and sustainable use of biodiversity. It provides evidence of the current state of the world's biodiversity and recent trends; evidence of the linkages between biodiversity and sustainable development; and evidence of successful actions taken to conserve and sustainably use products and services that the world's biodiversity provides to support food security, livelihoods and human well-being. Such evidence is critical for developing any frameworks that will guide post-2020 forest and environment protection efforts. Several case studies illustrate innovative

practices and interventions in forest biodiversity conservation and sustainable forest use.

According to SOFO 2020, forest deforestation and degradation continue to take place at alarming rates (albeit with globally reducing rates of forest loss), which contribute significantly to the ongoing loss of biodiversity. Forests cover 30.8 percent (4.06 billion hectares) of the global land area; with more than half of the world's forests found in only five countries- the Russian Federation, Brazil, Canada, the United States of America and China. Between 1990 and 2020, this area decreased from 32.5 percent to 30.8 percent, representing a net loss of 178 million hectares (ha) of forest, an area about the size of Libya. The average rate of net forest loss declined by roughly 40 percent between 1990-2000 and 2010-2020 (from 7.84 million ha per year to 4.74 million ha per year). Although there is some progress towards reversing global loss of forest cover, the world is not on track to meet the United Nations Strategic Plan for Forests (UN, 2017) to increase forest area by three percent by 2030 (relative to 2015). SOFO 2020 adds that not enough has been done to meet the Aichi Target 5 and Goal 1 of the New York Declaration on Forests, to at least halve the rate of loss of natural forests globally by 2020 (relative to 2010).

Naturally regenerating forests form the bigger portion of forests globally, although a coordinated response to their protection should be a priority in the post-2020 global biodiversity framework. This is in light of growing pressures on forests, such as agricultural expansion, which remains a key driver of forest degradation and biodiversity loss. Moreover, the resilience of human food systems and their capacity to adapt to future change depends on this very biodiversity.

On planted forests, SOFO 2020 reports that the area of planted forests has increased by 123 million ha since 1990 and now covers 294 million ha; but the rate of increase has slowed since 2010. Approximately 45 percent of the planted forests (or three percent of all forests) are plantation forests, i.e. intensively managed forests, mainly composed of one or two tree species, native or exotic, of equal age, planted with regular spacing and mainly established for productive purposes. The other 55 percent of planted forests, "Other planted forests", are forests that resemble natural forests at stand maturity and include forests established for ecosystem restoration. South America has the largest proportion of planted forests that are plantation forests (99 percent of the planted forest area) while Europe has the smallest share (six percent of planted forests). The report has no statistics for the state of planted forests in Africa.

The report recognizes that rural populations world over rely on forests, their biodiversity and ecosystem services for income and so the relationship between poverty and forest landscapes- many times complex and dynamichas major implications for global and national efforts

to fight poverty and to conserve biodiversity. For instance in the Gambia and in Mexico, income growth induced by a conditional cash transfer programme and a community-driven development programme, respectively, increased forest loss. Whereas studies in Uganda suggest that programmes offering payments in compensation for conservation activities have successfully reduced rates of deforestation.

Progress on preventing the extinction of known threatened species and improving their conservation status has been slow. More than 60 000 different tree species are known and by December 2019, more than 20 000 tree species had been included in the IUCN Red List of Threatened Species. However, several countries are implementing genetic resources conservation and tree improvement programmes; focusing largely on

traits of commercial interest, such as growth, wood properties and resistance to or tolerance of pests and diseases. Other programmes focus on climate-change-related traits such as plasticity and drought tolerance. All the above contribute to enhancing tree biodiversity.

SOFO 2020 therefore calls for bold actions, sustainable solutions and transformations to reverse forest degradation and biodiversity loss for the benefit of current and future generations. Suggested actions include effective governance, policy alignment between sectors and administrative levels, land-tenure security, respect for the rights and knowledge of local communities and indigenous peoples, enhanced capacity for monitoring of biodiversity outcomes and innovative financing modalities to promote forest conservation and poverty eradication among forest-dependent communities.



Monkeys in Mabira Central Forest Reserve. Forests are home to biodiversity but deforestation and forest degradation are increasing at alarming rate. Bold actions are required to reverse loss of forests and their biodiversity for current and future generations.

## Afzelia africana – a valuable tree species yet vulnerable to extinction

fzelia africana Sm. ex Pers is also known as African mahogany, African Oak, Meli in Lugbara and Beyo in Luo in Uganda. Afzelia africana is a large tropical African leguminous and multipurpose tree, occurring from the West Coast of Africa (Senegal) to Congo in East Africa. In Uganda, it is mainly found in West-Nile and Northern regions, growing on both private farmlands and protected natural forests. The tree has a straight trunk, cylindrical and branchless to up to 20m high. Afzelia africana is mainly used for its heavy wood, which is light brown to red brown in color, durable, termite-proof, and of high quality (dimensional stability and durability). It does not require treatment prior to usage in permanent humid conditions or in places where insects are abundant. This makes it an excellent wood for use in carpentry, making canoes, building houses, paneling, parquet floors, making door frames, stairs and many types of

furniture and kitchen utensils. The demand for Afzelia africana is comparable to that for teak or merbau hardwood. Afzelia africana is also used for firewood and charcoal production.

Afzelia africana is considered one of the most important woody fodder plants in many parts of Africa; with its foliage is reported to be good for cattle particularly during the dry season and the beginning of the rainy season when grass has not grown yet and other forages are rare. The leaves can be cooked as vegetables while young leaves are mixed with ground cereals before cooking. The flowers are used as condiment in sauces, the seed aril is reported to be sweet and the fruit can be used to make percussion instruments called castanets. The seed is rich in protein and oil and can be used to make flour or mixed with wheat flour in order to increase protein value. The seed also has

©FAO/Anita Tibasaaga

a water-soluble gum (xyloglucan) which is used as a thickening agent for soup in Southeastern parts of Nigeria while the oil, which has long shelf-life, can be used for cooking or as semi-drying oil with industrial applications in surface coatings of alkyd resins.

Afzelia africana tree is associated with ectomycorrhizal fungi which enrich the soils. The tree can be planted as a shade tree and in many villages it's used for boundary demarcations or boundary belts.

Lastly, the roots, bark, leaves and fruits are used in traditional medicine in various forms (including powdered and chewable) to treat numerous ailments such as malaria and rheumatism or treating digestive problems such as constipation and vomiting.

#### Vulnerability to extinction

Although Afzelia africana is widely spread in many parts of Africa, in 1998 it was re-assessed and reclassified as 'Vulnerable' on the International Union for Conservation of Nature (IUCN) red list of species, due to the threat of over-exploitation for timber on the international market. In Uganda, the tree is on the verge of extinction, owing to uncontrolled and rampant illegal harvesting of its logs and products, highly demanded in Asian markets. Furthermore, the natural regeneration of Afzelia africana is affected by rampant wild fires and prolonged droughts which destroy the seedbanks and hindered by browsing (wild animals and livestock) which feed on the foliage hence damaging terminal buds.

To limit the illegal harvesting and trade in *Afzelia africana*, in 2018, the Ministry for Water and Environment, suspended any cutting, transportation and sale of logs and their products in order to review and harmonize the licensing, harvesting and movement of the products and boost massive planting on privately-owned farmlands, road reserves and restoration of degraded sites.

©Courtesy: Schnelle Aufforstung
Technologies und Projects Limited

Mature tree of Afzelia africana in Amuru District

#### Domestication of Afzelia africana

Although Afzelia africana has not been grown in plantations in Uganda for commercial purposes, some countries for example Côte d'Ivoire, have successfully planted Afzelia Africana in plantations and it has exhibited good growth. The tree thrives in areas with an annual rainfall of more than 900mm, altitude of up to 1400m and is more adaptable in areas with deep, well-drained but moist soils. Afzelia africana tolerates light shade when young, therefore it can established in a pure or mixed stand (restoration).

#### Tree management

Upon successful land preparation, planting holes of 40cmx40cm at a spacing of 3x3metres are made. After planting, young plantlets should be protected against damage by animals, for 2-3 years and against fires. Regular weeding is vital in young *Afzelia africana* plantations. Both first and second thinning are recommended before a stand attains 12 years from planting. *Afzelia africana* seedlings are susceptible to fungal and grasshopper attacks. Young trees should be protected against browsing by livestock and wild game.

#### Sources of planting material

Afzelia africana seed and seedlings can be obtained from the National Tree Seed Center (NTSC) in Namanve or from FAO/SPGS III certified private nurseries such as Schnelle Aufforstung Technologies und Projects Limited in Omoro district. At NTSC, one Kilogram of Afzelia africana (350-450 seeds) costs UGX 60 000 and a seedling costs UGX 1 000. For those intending to plant large areas, it's advisable to book in advance, to allow nurseries to raise appropriate quantities. Contacts of FAO/SPGSIII (2019/2020) certified nurseries are available via the project website: www.spgs.mwe.go.ug.



Weeding Afzelia africana nursery bed at Schnelle Aufforstung Technologies und Projects Limited, Omoro District

By Peter Ssekiranda- Programme Assistant, FAO

## Opinion: Climate change and other forces are chipping away at the world's forests on a daily basis



n 21 March 2020, the International Day of Forests is putting the spotlight on the great variety of animal, plant and other life supported by the world's forests with the theme, "Forests and Biodiversity: Too precious to lose." While this observance encourages us to appreciate the benefits of forests—from Pacific coastal redwoods to tropical mangroves—it is more of an urgent call to action than a celebration.

Forests are home to most life on land, an estimated 80 percent of the world's terrestrial biodiversity. This natural wealth goes far beyond the 60,000 species of trees that have been identified to date. It includes plants, animals, organisms and ecosystems which help to keep our air, soil and water healthy and which provide us with food, fuel and shelter. Roughly one billion people depend directly on forests for their food, and that figure does not include the farms that rely on nearby forests for pollinators like bees and bats.

All this biodiversity is under serious threat from climate change and other forces that are chipping away at the world's forests on a daily basis. An estimated 73 percent of deforestation in the world is driven by the clearing of land for agriculture. How, then, do we meet our needs as a growing population without damaging the very forests and biodiversity on which we all depend?

The conservation and sustainable management of forests is essential to biodiversity. So, too, is a better understanding of the conditions and activities that affect forests, such as food and timber production, urbanization, poverty, and land access.

Last year, the first-ever global report on food-related biodiversity, produced by the Food and Agriculture Organization of the United Nations (FAO), showed that biodiversity-friendly practices in food production were actually on the rise. Eighty percent of the 91 countries surveyed indicated they were using organic agriculture, sustainable forest management, ecosystem restoration or other approaches to conserve and restore forest resources.

Still, much more needs to be done. Many countries have started to introduce policies and other tools to support sustainable land use but often, these fall short of yielding results. There are various reasons for this, including insufficient implementation or not targeting the true causes of biodiversity loss.

We need to improve the actual implementation of existing solutions, if we want to manage forests and biodiversity in more sustainable ways. We need to back up these efforts with increased monitoring of the effects of various factors on biodiversity, and greater legal and financial incentives for people and investors who influence decisions on land use.

FAO recently adopted a strategy to help countries mainstream biodiversity-friendly practices across agricultural sectors. The aim is to support the development of strategies, policies and practices that reflect the essential role that forests play in various aspects of our lives, whether they sit within protected areas, near agricultural fields, or in urban areas.

Many of the people whose daily activities have the greatest impact on the health of our forests are also among the poorest and most marginalized in the world. Their situations need to be taken into account in encouraging more sustainable forest use.

In The Gambia, for example, massive losses of wild foods have forced forest communities to turn more frequently to industrially-produced foods to supplement their diets. The government is trying to restore forest biodiversity by giving communities direct ownership of the land on which they have long depended. People now have a greater stake in keeping forests healthy. They are learning more efficient ways to plant crops, control pests, hunt, and gather wood, thus reducing stress on the land and water.

Countries' efforts to improve the ways in which people interact with the world's forests are informed by a list of internationally-agreed benchmarks, the Aichi targets, which were adopted in 2010 to help safeguard global biodiversity, and which are set to be revised towards the end of this year. Amid the growing media noise over action to address urgent challenges like climate change and hunger, it cannot be stressed enough how important it is for countries to make these targets a priority in planning.

It is vital, too, for all of us to take an interest in the political and organizational decisions that can affect our natural forests. There is no quick way to substitute all those forest creatures and ecosystems which have evolved over millions and millions of years.

Forests, with their wealth of biodiversity, have always sustained our lives. It is time for us to return the favour.

This article was also published by Thomas Reuters Foundation here https://news.trust.org/item/20200321093151-pygir

By Hiroto Mitsugi- Assistant Director General of the Forestry Department, FAO Rome

## SPGS III is a project of the Government of Uganda, funded by the European Union and implemented by the Food and Agriculture Organization of the **United Nations (FAO)**



Food and Agriculture Organization of the United Nations (FAO) Sawlog Production Grant Scheme (SPGS) III Project Office
Plot 92 Luthuli Avenue, Bugolobi
P.O. Box 521 Kampala Email: FAO-UG@fao.org Phone: +256 414 349916/7

Twitter: @FAOUganda



