



MINISTRY OF WATER AND ENVIRONMENT

Forestry Sector Support Department (FSSD)

P.O. Box 20026, Kampala, Uganda

INTERNATIONAL DAY OF FORESTS

THEME: FORESTS AND EDUCATION



Hon. Sam Cheptoris
MINISTER FOR WATER AND
ENVIRONMENT



Hon. Mary Gorret Kitutu
STATE MINISTER FOR
ENVIRONMENT



Mr. Alfred Okot Okidi
PERMANENT SECRETARY

BEEKEEPING AND FORESTRY INTEGRATION: A DRIVER TO CONSERVATION OF THE ENVIRONMENT AND INCOME ENHANCEMENT OF FARMERS

Land has been a major source of contestation in Uganda (Daily Monitor of 16th Dec 2018; New Vision of March 24th 2018) yet it is an important factor of production. Whereas it has become rhetoric for members of the forestry, environment and natural resources fraternity to keep lamenting, complaining and yelling due to the alarming rate of forest degradation, we cannot afford to continue folding our hands and just look on. According to latest research, the forest estate shrunk from 24% of the total land area in 1990 to 9% in 2015. According to a report on the State of Uganda Forests 2016 by the Ministry of Water and Environment, 3.05 million hectares of forest were lost in a span of 25 years! Unless alternative ways of conserving forests that allow communities to earn income without causing extra harm are explored and supported, then we may lose out on all the benefits that accrue from these forests.

Conservation of indigenous trees and tree planting as a whole is paramount due to the numerous roles of forests which include carbon sequestration, soil stabilization, aesthetic value, serving as habitat for many fauna including the important pollinators known as honeybees (Kajobe et al. 2009). Furthermore, forests can be commercialized for enterprises such as tourism, mushroom growing and apiculture. Among all the options mentioned above, apiculture requires the least level of capital investment for anybody to establish, a fact that makes it the alternative investment option of choice for many people so long as they have the interest. Secondly, beekeeping has an advantage over other enterprises because it requires a small area to establish. According to research, bees feed within a radius of 1 Km and as such, even a small land area of one acre (0.4 Ha) is enough to have an apiary established whereas other enterprises may need large chunks of land. Additionally, some farmers have indigenous trees and plantation species such as Eucalyptus, Calliandra, Bottlebrush, mangoes, and oranges among others on their farms. These are important sources of food for the bees. Scientifically referred to as *Apis mellifera scutellata*, the African honey bee needs these trees so that it continues playing its role as a source of livelihood to many poor families. Furthermore, honey is enjoyed by all people across the social divide and as a matter of fact, the demand for honey and other key bee products such as beeswax and propolis exceeds supply both locally and internationally. Bees play an important role of conservation through pollination. This symbiotic relationship results in regeneration of young trees through seed production, seed dispersal and finally germination of the same into seedlings and later saplings. Indigenous bee forage trees include *Albizia spp*, *Acacia spp*, *Cordia spp* and *Erythrina spp*. Research revealed that, the above species contribute bee pollen, nectar or both which are core in making honey, a key organic natural food in Uganda (Kajobe et al. 2009).

Plantation species such as *Grevillea robusta* (silky oak) and *Eucalyptus spp* (gum trees) are a source of nectar. Establishment of many plantations of such species coupled with introduction of beehives in the plantations can boost honey production. This is because such agroforestry technologies including additional planting of Calliandra, Chia seeds, sesame, bananas and coffee helps to avail forage needed for honey production. A case in point of the latter is of one of the TUNADO members i.e. Mbale CAP. Members of this Bugisu based Community Based organization (CBO) have embraced the practice of banana, coffee and beekeeping integration, culminating in wonderful results. "Mr. Patrick Wakuma places beehives in his coffee plot by scattering them all over the plantation. This has resulted in his coffee yield going up from 115 bags to 125 bags in a year. In addition, he harvests honey from the hives which he sells for a profit". (Bees for development, July 2017).

Apiculture is a source of income to farmers from honey and other hive products such as propolis. Furthermore, the farmer gets the best of both worlds in that he is able to make money from hive products as well the forestry enterprise once the rotation period is reached. Having beehives on your farm helps to provide employment to the young men and women who may be employed either full time or part time to work on farm and manage apiaries in Uganda. Though not developed yet, pollination services of bees is another potential source of income to beekeepers but this needs further exploration and commercialization in Uganda. Communities that have shortage of food, sometimes depend on honey as the alternative as it can be eaten by anyone as food. To underline the importance of bees in our farming systems, a farmer for example, does not have to rely on only forestry, coffee or banana products (depending on the value chains on his/her farm) but rather on the hive products as produced by bees as a result of integration of beekeeping on the farm.

Profitability of Beekeeping

An apiary can be established using locally available materials such as old clay pots, woven baskets and hollow log sections by making slight improvements on them. However, locally woven hives which cost between Uganda shillings 10,000

and 20,000, depending on size and level of modification are recommended for starters. These can even be made by the farmers after training by hive making experts. It should be noted however that the economics of beekeeping need to be shared with potential and practicing farmers for purposes of making informed business decisions. In order to discuss this subject elaborately, let's use the Kenya Top Bar (KTB) as the hive the farmer has on their farm: '1 hive with its stands costs 110,000/-'; a protective gear costs 150,000/-, a hive tool, smoker and airtight buckets costs 80,000/-; hence the total cost of establishing an apiary will be 420,000/- but if more hives are added into the apiary to reach a total minimum recommended number of 25 hives, then the establishment cost will be 3,040,000/-. There are two harvesting seasons in a year and experience show that the farmer, at the end of the second harvesting season makes approximately 4,000,000/- from his apiary. This means that the initial investment is recovered at the end of the first year in business but the subsequent years yield mainly profits for the farmer from his/her investment. It should be noted that beekeeping needs dedication and time in order to make profits out of it, and the KTB hives will last for up to 10 years if well maintained.

Today as the Government of Uganda through the Ministry of Water and Environment joins the rest of the world to commemorate the International Day of forests under the theme "Forests and Education", we as beekeepers and other stakeholders to leave indigenous trees intact and plant more trees for bee forage we are all being called upon to. The Government of Uganda through the Ministry of Water and Environment and its partners like, the Uganda National Apiculture Development Organization (TUNADO) is already. We therefore pledge continued collaboration with stakeholders in this struggle. We further request all stakeholders who have the means to also consider raising and distributing forage trees to beekeepers as a means of conserving our environment.

As Uganda joins the rest of the international community to celebrate the International Day of Forests under the theme "Forests and Education", the Government through the Ministry of Water and Environment and partner organisations such as The Uganda National Apiculture Development Organization (TUNADO) calls upon all conservationists, tree planters, ecologists, environmentalists, farmers and members of the general public to integrate beekeeping on their farms/forest plantations to achieve conservation goals while creating employment, generating income and increasing crop productivity per acreage. Beekeeping is a direct contribution to most of the Sustainable Development Goals (SDGs), including but not limited to SDG goal 1 (Zero Poverty), goal 2 (Zero Hunger), Goal 4 (Quality Education), goal 13 (Climate Action) and Goal 15 (Life on Land). The entire population including beekeepers and other stakeholders are encouraged to leave indigenous trees intact and plant more trees for bee forage as well as a healthy environment.



An apiary comprising KTB, Langstroth & Woven local hives in Maracha Town Council, Maracha District. The hives are placed under eucalyptus trees, the forage for the bee colonies.



Beehives sited under acacia trees in Rosilang Sub county, Kotido district. Indigenous trees are a source of good forage for bees.

KEEP CLOSE TO NATURE

Keep close to Nature's heart... and break clear away, once in a while, and climb a mountain or spend a week in the woods. Wash your spirit clean. Look deep into nature, and then you will understand everything better.

If forests are food for the mind through which stress is washed, then why not conserve the existing, plant more, report illegal

activities and sensitize generations in joy through picnics and forest tours.

The time to act is now. Let's protect the nature together
Faridah Nampera
Forest Sector Support Department
Ministry of Water and Environment

FOREST SECTOR SUPPORT DEPARTMENT

Spear heading tree planting initiatives in the country through afforestation and restoration of degraded and fragile landscapes like bear hills, streams and river banks among others.



The Forest Sector Support Department of the Ministry of Water and Environment has continued to support tree planting efforts across the country where by small, medium and large (commercial) private tree growers and communities have been supported. Besides the main objective of tree growing being economical, other auxiliary benefits like environmental protection, protection of water sources, carbon sequestration and mitigating adverse effects of climate change among others are added benefits.

Pine plantation belonging to Kakyenkye Kahatanga Planting Group in Buhunga Sub County, Rukungiri District established with support from the Forestry Sector Support Department under FIEFOC II project, Ministry of Water and Environment.

With the above initiative, the Forestry Sector Support Department (FSSD) with support from AIDB, World Bank, and GOU counterpart funding through projects such as Farm Income Enhancement and Forestry

Conservation Project II (FIEFOC II) and Reducing Emissions from Deforestation and Forest Degradation plus the associated effects (REDD+), have distributed over 7.5 million assorted quality tree, fruit and bamboo seedlings all over the country during financial years (FYs 2016/17, 2017/18 and 2018/19). With this therefore, the FSSD has been able to increase forest cover by 12,000 hectares on private land and degraded landscapes.

Strengthening Policies and Guidelines

The department has continued to enforce various laws, policies and Ministerial orders with support from its Partners. Among the key highlights being:

- Continued enforcement of the Azelia africana ban;
- Improved timber conversion technologies in Uganda being promoted by the department
- Regulation of timber trade through licensing in the country;
- Development of standards and guidelines

to facilitate export of wood products from Uganda to other countries;

- Developing of National Tree Nursery establishment guidelines to promote supply of quality tree planting materials to the population, etc.

Capacity building and Technical backstopping of forestry initiatives in the country

The Forestry Sector Support Department (FSSD) has continued to provide technical support, awareness creation, advisory services and coordination with different stakeholders in the environment and natural resources sub-sector to enhance sustainable management and utilization of forestry and environmental resources.



A Wood Mizer Mobile Sawmill LT 40, converting Pinus caribbea logs into high quality timber at Bukelere CFR, Mayuge District. FSSD encouraging private tree growers to acquire such equipment in order to be able to minimize wood wastage and hence maximising profits

Uganda National REDD+ Programme



REDD+ (Reducing of Emissions from Deforestation and forest Degradation and the promotion of the role of forest conservation, sustainable forest management and enhancement of forest carbon stocks) is an effort intended to contribute to the mitigation of climate change and improve livelihoods of communities. The REDD+ programme is one of the programmes being implemented by the Forest Sector Support Department of the Ministry of Water and Environment with support from World Bank, Austrian Development Cooperation, UN-REDD and Norway. Uganda is currently implementing the REDD+ Readiness Phase (2013-2019) of the REDD+ process and has prepared its four key elements:

1. A Socially and Environmentally viable National Strategy and Action Plan,
 2. A National Forest Monitoring System,
 3. A Forest Reference Emission Level
 4. A Safeguards Information System
- A Benefit Sharing Arrangements and

a Feedback and Grievance Redress Mechanism to support the Strategy and action plan are in place.

REDD+ was acknowledged as a fundamental element of the global climate agenda in Paris during COP21 in December 2015 in the Annex of the PARIS AGREEMENT, with a dedicated article, "Article 5".

Support to the Uganda's National REDD+ Readiness Process



Forest Investment Programme (FIP)

Uganda's FIP was endorsed by the Climate Investment Fund (CIF) during the FIP - Sub Committee Meeting, in Washington D.C. USA on June 9, 2017. CIF highly commended

Uganda's FIP document as a high-quality document. The main purpose of the FIP is to support Uganda's REDD+ efforts by providing up-front bridge financing for readiness reforms, and public and private investments identified through national REDD+ Readiness Strategy building efforts, while taking into account opportunities to help them adapt to the impact of climate change on forests and to contribute to multiple benefits such as biodiversity conservation, protection of the rights of indigenous peoples and local communities, poverty reduction and rural livelihoods enhancement.



Launch of REDD+ Communication Materials



REDD+ Engagements

With School Kids



With the Youth



Key Drivers of deforestation & degradation identified during Strategy formulation