

From the Woods to Action: TonF now at the forefront in Uganda's restoration agenda

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Agricultural productivity and biodiversity conservation are inseparable

For the success of the post-2020 global biodiversity framework, it will no longer be sufficient to seek to limit biodiversity loss through agriculture. Instead, agriculture must become an integral element of sustainable landscapes a force for conserving biodiversity and providing vital ecosystem services to local populations and securing livelihoods.

Trees on Farms (TonF) play a critical role in contributing to biodiversity conservation in agricultural landscapes through in-situ conservation, by connecting fragmented wild habitats and providing stepping-stones between protected area networks and conserving soil biodiversity and agrobiodiversity. TonF are one of the key nature-based solutions to the conservation and food production challenges we face as they also play a critical role in achieving sustainable, biodiversity friendly agricultural landscapes.

To date, TonF are still invisible in most National Biodiversity Strategies and Action Plans (NBSAPs).



The 'Trees on Farms for Biodiversity' project

Funded by the International Climate Initiative (IKI), the **IKI-TonF project** was a joint programme implemented between 2018 and 2021 at the global level and in five countries: **Honduras, Peru, Uganda, Rwanda, and Indonesia**. It aimed to influence decision making and action on the ground to scale up the use of Trees on Farms (TonF). The project demonstrated how ecological, financial, and societal benefits of TonF can contribute to improving human wellbeing hand in hand with biodiversity outcomes, as well as countries' abilities to meet the Aichi Biodiversity Target 7 (Sustainably Managed Agricultural Areas).

Led by World Agroforestry (**ICRAF**), the IKI-TonF project was implemented in Uganda by the ICRAF Country office in collaboration with Uganda's Ministry of Agriculture, Animal Industry and Fisheries (**MAAIF**) and the Ministry of Water and Environment (**MWE**) and some of their associated agencies and departments, including the National Environment Management Authority (**NEMA**), National Forestry Authority (**NFA**) and Forest Sector Support Department (**FSSD**).



Key achievements

- **Showcasing agroforestry options led to the uptake of TonF by other players:** Research and testing of options for TonF and agroforestry at the pilot site in Mount Elgon inspired the Environmental Conservation Trust of Uganda (ECOTRUST) to test the tool as a benchmark for monitoring of co-benefits arising out of REDD+ Early Reduction Programs (ERPs).
- **Training the next generation:** sustainability and cross-fertilization of TonF knowledge in education and research: research, training, and knowledge transfer inspired the faculty staff at Makerere University to include TonF and agroforestry into their curricula.
- **Financial incentives for TonF implementation secured:** The East African Development Bank (EADB) and the Uganda Bankers' Association (UBA) engaged in the project and committed to integrate nature-based risk assessment in their financing portfolio. Also, the World Bank and the Government of Uganda launched one of the largest TonF projects in Uganda. These activities will help to stimulate farmers to scale up the TonF approach.
- **Uptake of TonF into Uganda's natural capital accounting and valuation of ecosystem services:** MWE launched the National Forestry Consultative Forum and created the Agroforestry and Urban Forestry subforum co-chaired by the IKI-TonF team. The project also supported the development of Uganda's first ever National Bamboo Strategy and Action Plan.
- **Increased inter-sectoral collaboration at the government level supports a coordinated approach to biodiversity conservation:** The project fostered collaboration among the ministries of environment (MWE) and agriculture (MAAIF) on TonF related issues, especially the development of the National Agroforestry Strategy which identifies TonF opportunities and targets and will ultimately inform the National Forestry Policy.
- **The role of TonF is recognized in Uganda's reporting to the CBD:** Based on contributions by the IKI-TonF project, Uganda's 6th National Report to the CBD includes TonF as a national indicator to monitor and measure the biodiversity value of agriculture landscapes. The role of TonF in enhancing productivity of agricultural land is highlighted in the report.



INTRODUCTION

Uganda has a wide diversity of animals and plants that flourish and spread even outside protected areas. This rich heritage is under grave threat. Like many other countries in the world, Uganda has experienced severe deforestation, with forest cover declining from 24% in 1990 to just about 10% in 2015. Even in protected areas, there is a dramatic decline in tree cover.

Although deforestation and degradation rates in Uganda are not specific to a single driver, most of the biodiversity loss is related to smallholder farming through expansion of fields into forested areas and the conversion of savannah grasslands and wetlands for maize and rice growing. With a population growth rate of over 3% Uganda's food demand will continue to grow.

Agroforestry plays an important role in Uganda: about 90% of smallholder farmers report that they plant, grow, or protect trees on their farms (UBOS, 2014). Trees on Farms (TonF) are planted at varying scales and for different motives, e.g., as woodlots (for poles

or fuel wood), as windbreaks (for homesteads and crops), and for boundary planting. Hence, TonF clearly have an important role to play socially, economically, and ecologically. Since its establishment in 1999, the Environmental Conservation Trust of Uganda (ECOTRUST) has worked with thousands of farmers and, to date, over 6,200 hectares with TonF have been planted potentially holding about 1.2 million tons of carbon dioxide.

Yet, despite the importance of TonF, the knowledge of geographical coverage and related attribute information was limited prior to the IKI-TonF project. There was no established mechanism in Uganda to report on TonF through the Uganda Bureau of Statistics and the National Forest Management System. Analysis of TonF in national environmental statistics, natural capital accounting, or ecosystem valuations, were missing. Importantly, because of the institutional separation of forestry and agriculture sectors, policy support for TonF was insufficient.



WHAT DIFFERENCE DID THE IKI-TonF PROJECT MAKE?

Showcasing agroforestry options led to the uptake of TonF by other players

The Mount Elgon region in eastern Uganda is a biodiversity hotspot, water tower and trans-boundary landscape. It is of critical importance to biodiversity conservation and ecosystem services, and IUCN has established the area as one of its long-term socio-ecological research sites and has had several interventions there including the **Sentinel Landscape Initiative**. Mount Elgon was also chosen as one of the sites for the IKI-TonF project. One of the outputs of the TonF work in the region was an assessment tool providing quantitative measurements of biodiversity in agricultural landscapes and the contribution of TonF. Various stakeholders and policymakers use the tool to monitor biodiversity on farmlands, thus obtaining data which can help to manage and improve crop productivity and biodiversity conservation.

Effective monitoring frameworks that account for contribution to biodiversity are also relevant for NGOs and government institutions working on reducing emissions from deforestation and forest degradation (REDD+). In 2019, the IKI-TonF project highlighted the benefits of their biodiversity assessment tools on farmlands to the Environmental Conservation Trust of Uganda (ECOTRUST) and subsequently was invited to suggest a concept for adapting it for their monitoring processes. In November 2019, ECOTRUST tested the tool as a benchmark for monitoring of co-benefits that would arise out of REDD+ Early Reduction Programs (ERPs).

Training the next generation: sustainability and cross-fertilization of TonF knowledge in education and research

The methodologies for assessing biodiversity on farmlands developed in the Mount Elgon region were accompanied by research done by two master students from SOAS University of London, UK, and the University of Hannover, Germany. The research results started to inform future work in this area and generated information that can be utilized by other non-profit, private sector and government stakeholders. An important opportunity for scientific exchange was established when the project supported staff from Makerere University, School of Forestry, Environmental and Geographical Sciences, to attend a training in Honduras on the biodiversity monitoring framework in 2019. This cross-fertilization of knowledge and technologies led to the university staff integrating respective training modules into their own curricula. Hence, future students in Uganda will gain knowledge on the assessment of biodiversity on farmlands and the contribution of TonF to ecosystem services and can help to provide the information urgently needed for decision making in biodiversity conservation, ecosystem management and achieving sustainable livelihoods.

Financial incentives for TonF implementation secured

Already, many smallholders in Uganda are growing trees on their land, yet they need to scale up the

TonF approach as well as diversify the trees used. To encourage the farmers, it is not only important to provide the specific knowledge, but also to offer accessible information on economic incentives including credit options, insurance, and risk sharing. Yet, banking institutions in Uganda are often not sufficiently informed or appreciative of tree growing enterprises.

As part of the project's strategy to develop multi-sectoral financing systems for TonF interventions, the IKI-TonF team worked with the financial sector in Uganda, especially for agricultural insurance, to incorporate TonF in their running schemes. A strong collaboration was established between the IKI-TonF team Uganda and the East African Development Bank (EADB) and together they engaged in meetings with the Uganda Bankers' Association (UBA). The project also supported two EADB finance specialists in attending a relevant workshop in Bonn, Germany, further developing their capacity to engage in and promote TonF.

These activities contributed to the financial partners realizing the value of investing in tree growing and climate proofing their investments. Some financial institutions started to integrate nature-based risk assessment in their financing portfolio thus de-risking their investments. For example, the World Bank and the Government of Uganda developed a project under the Investing in Forests and Protected Areas for Climate-Smart Development (IFPA-CD) program. Component 3 of the project is designed to encourage establishment of greater tree cover in refugee-hosting landscapes outside protected areas, supporting sustainable forest management and landscape resilience on private and customary land. One of the activities of Component 3 is to assist communities to develop mixed use TonF (agroforestry) systems on their household plots. This is one of the largest TonF interventions in Uganda covering 18 districts in western and north-western Uganda. It has an ambitious target of reaching almost 80'000 households each with about 0.2ha totaling to about 17'500 ha where trees are planted.

Uptake of TonF into Uganda's natural capital accounting and valuation of ecosystem services

From the beginning, the TonF team engaged with the MWE Forest Sector Support Department (FSSD) advocating for the profile and portfolio of TonF in the country's natural capital accounting and policy considerations. In March 2019, MWE launched the "National Forestry Consultative Forum" envisioned to be the key national platform to engage, discuss, and recommend strategic and operational measures and actions that are relevant for the sustainable management of forests and trees. The TonF project advocated specifically for including TonF not as

a further theme under the forum but giving it a prominent stage by creating a specific agroforestry and urban subforum as a separate entity under the National Forestry Consultative Forum of MWE. This was intended to raise the profile and portfolio of TonF in the country's natural capital accounting and policy considerations. The Agroforestry and Urban Forestry Subforum was created in 2019 and is anchored in the Forestry Policy. The TonF country team was appointed by the MWE to co-chair the subforum which was operationalized in 2020. Together with the Agroforestry and Urban Forestry Subforum, the IKI-TonF project was in the position to develop Uganda's Draft National Agroforestry Strategy and identify policy opportunities and gaps regarding TonF and restoration targets which will ultimately inform the National Forestry Policy that is currently under review.

The IKI-TonF project also met several times with the Environment and Natural Resources working group of the MWE. In May 2019, the working group reported on the role of TonF to livelihoods improvements in their Joint Sector Review report to the MWE. This provided a further opportunity to raise the profile of TonF in the national policy agenda as well as systematically obtain statistics on the contribution of TonF to the national GDP.

In addition, the IKI-TonF team supported the MWE's National Forestry Authority (NFA) by participating in the drafting of the first ever **National Bamboo Strategy and Action Plan** for Uganda, specifically providing advice and input on the propagation of planting materials and the use of bamboo for livelihoods and landscape restoration. With this, Uganda now has a guiding document on how to manage bamboo resources for economic, social and environmental benefits, thus reducing pressures on the natural forests.

Increased inter-sectoral collaboration at the government level supports a coordinated approach to biodiversity conservation

An important achievement of the IKI-TonF project in Uganda was the increased awareness and appreciation of the benefits of TonF and agroforestry for biodiversity conservation and household well-being across various ministries. The project held joint events between the ministries responsible for environment (MWE) and agriculture (MAAIF) and explored opportunities for close collaboration given the linkage between the two sectors. A key outcome of this was the increased willingness to coordinate work on issues relating to TonF, especially the emerging collaboration on the joint development of the National Agroforestry Strategy designed by the Agroforestry and Urban Forestry subforum mentioned above. Both ministries are currently reviewing the draft and will ultimately approve the strategy.

The strategy proposes a coordination and a financing mechanism that will allow coordinated implementation of the national TonF targets.

The role of TonF is recognized in Uganda's reporting to the CBD

Realizing the project's goal to help countries contribute to the post-2020 biodiversity framework, the IKI-TonF team participated in reviewing Uganda's 6th National Report to the Convention for Biological Diversity (CBD).

Recognizing the limited appreciation of TonF in the initial draft, Uganda's Focal Point for the CBD invited the team to suggest a respective text acknowledging TonF as a national indicator to monitor and measure the biodiversity value of agriculture landscapes. Uganda's CBD Focal Point highlighted the role of TonF in enhancing productivity of agricultural land in the country's 6th National Report, which was published July 2019. The National Environment Management Authority (NEMA) is considering using the indicator as a measure of biodiversity conservation.

CONCLUSIONS

Capacity strengthening and policy interventions at the national level helped the IKI-TonF project in Uganda to achieve important goals. The IKI-TonF team played a critical role in raising awareness of TonF and training various stakeholders in the use of the TonF tools and methodologies, including biodiversity experts, financial institutions, farmers, and government institutions. The lessons learned in Mount Elgon will have to be scaled out to other landscapes, e.g. the Albertine Graben and West Nile, and there will be a need for ongoing, consistent dialogue and inter-sectoral collaboration

linking academia, NGOs, the private sector, and the government in order to ensure sustainability of behavioral changes. Still, the documentation of TonF in the 6th National CBD report provides an opportunity for the Government of Uganda to achieve possible new targets on agricultural sustainability under the post-2020 global biodiversity framework. Ultimately, Uganda's farmers will benefit from the fact that the Government of Uganda now recognizes their contribution to sustainable agriculture and offers finance mechanisms for TonF and agroforestry.

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based on a decision of the German Bundestag