

cifor-icraf COUNTRY PROFILE Uganda²⁰²⁵

About Uganda

Located on the Equator, Uganda has long been legendarily fertile. The fertility continues to this day with maize yields per hectare outstripping those of Kenya despite extremely low fertilizer use. Still, there is little room for complacency: 41% of Uganda's land is degraded, largely by soil erosion.

"Despite having very favourable natural resource and climate conditions for the production of a wide variety of crops and livestock, underperformance is the major characteristic of the agriculture sector," states one donor report.

Uganda has more reasons than most countries to safeguard its farms: 85% of its working population is employed in agriculture, according to Uganda Bureau of Statistics (UBOS 2022). This makes Uganda an outlier: the figures in Kenya, Ethiopia and Tanzania are 33%, 62%, and 65%, respectively. But it also means that every step towards more sustainable and profitable use of land is a step towards moving Ugandans out of poverty. While the number of people living in poverty is falling, they still account for 49% of the rural population, according to the World Bank (2025).

Uganda also relies on agriculture for foreign exchange. Coffee is the largest agricultural export. Farmers have worked hard for this: "Coffee exports in February 2025 were worth USD 167.68 million," states Uganda Coffee Development Authority (UCDA), adding that quantity and value had increased by 27.93% and 103.25% compared with February 2024. Of agricultural households, 21% grow robusta coffee and 7% arabica (UBOS 2022).

But Uganda is a country of small farmers – 67% have less than 1 ha and only 13% more than 2 ha – and hard work is insufficient. Climate change is wreaking havoc. "In February 2025, all regions experienced severe dry conditions, significantly affecting establishment, growth, and quality," the UCDA said. "Approximately 40% of seedlings planted October–December 2024 perished. Black coffee twig borer infestation is at 50%, followed by coffee wilt disease (40%) and coffee red blister disease (35%)."



More diverse trees, including fruit and native trees, would likely make this farming system in Bushenyi, Western Uganda, more resilient to climate impacts, including pests and diseases.

CIFOR-ICRAF in Uganda

ICRAF entered in Uganda in 1988 through an agreement with the Ministry of Agriculture, Animal Industry and Fisheries. CIFOR began its work in Uganda in 2010. Today, CIFOR-ICRAF works under a 1994 agreement with the National Agricultural Research Organization signed by the Ministry of Finance and is hosted on the Mukono campus of Uganda's National Forestry Resources Research Institute (NaFORRI).

In a country with seven agroecological zones, ICRAF first addressed highlands. In 1993, under a USAID-funded ICRAF project, the Agroforestry Research Network for the Highlands of East and Central Africa gathered in hilly Kabale in southwest Uganda. To researchers from Uganda, Kenya, Rwanda, Burundi and Ethiopia, Minister for Agriculture Henry Kyemba declared agroforestry's "great potential for increased and sustained production of food, wood, medicines and fodder, and environmental protection." All of that remains true today. ICRAF is valued in Uganda. "Traditional agroforestry technologies involving the leaving of big trees in home gardens and crop fields have been used from the beginning of settled agriculture," reads the National Agroforestry Strategy 2024/25-2033/34. But it was ICRAF, it states, that in 1988 with key collaborators started "agroforestry research and development activities."

"Agroforestry has been integrated into the 2001 Forestry Policy, the National Forest Plan – 2001, and the National Development Plans II and III," the strategy elaborates.

Our activities have contributed to tree cover on farms and scientific knowledge that is informing agriculture and environment policy and interventions.



Albertine Rift montane forests East African montane forests East African montane moorlands East Sudanian savanna Northern Acacia-Commiphora bushlands and thickets Rwenzori-Virunga montane moorlands Victoria Basin forest savanna

With respect to CIFOR, few organizations are as badly needed in this East African country once famed for its forests and tree diversity. Charcoal demand among its town dwellers and an export trade resistant to control have stripped biomass from woodlands. Africa's second-highest rate of population growth (after Niger) creates immense need for land to till. And forest governance is challenging.

The upshot is that Uganda has one of the world's highest rates of deforestation and forest degradation. In 1990, forest cover represented about 24% of the total land area. By 2015, it was 9%. Today, it has risen to 13.5% due to an ambitious sawlog production grant scheme that increased the area under We look forward to continuing work with Uganda's farming and forest communities, foresters, environmentalists, agriculturalists, planners, economists, civil society and government officials.

> - Peter Minang Africa director, CIFOR-ICRAF

plantations from 2,000 ha in 1990 to more than 100,000 ha today. While these plantations contribute little to biodiversity, they importantly supply the market, create jobs, help reduce greenhouse gas emissions, deliver some ecosystem services, and should provide a more sustainable timber alternative to natural forest resources.

CIFOR-ICRAF lauds this boom in softwood production; the government's early decisive action to place five precious forests – Mgahinga, Bwindi, Semuliki, Mount Elgon and Kibale – under the Uganda Wildlife Authority; and Uganda's embrace of urban forestry, the strongest in Africa.

Results on the ground

- Promoted management of trees in agroforestry systems through pruning, lopping, pollarding, coppicing, thinning and root trimming.
- Funded by BMZ, found that recovering grey water to grow food and trees and using organic residues for cooking energy increased refugee wellbeing.

- Under the Trees for food security projects funded by the Australian Centre for International Agricultural Research (ACIAR), reached 11,000 participants and conducted more than 800 participatory trials to test agroforestry options from boundary planting to riverbank stabilization.
- Under ICRAF's Article 15 collection, continually tracks and reports on international field gene banks managed by NaFORRI with two species – Vitellaria paradoxa in Mukongoro and Ngetta and Prunus africana in Nalwana.

Major achievements

- Improved dairy feeding using shrubs Calliandra, Leucaena and mulberry, tripling milk yields from 5–6 litres to 17–18 per cow, causing a 29 percent boost in dairy household income.
- Under the Italy-funded AGILE project, in Kapchorwa, Kabale and Bundibugyo, scaled Landcare, an approach that rapidly and inexpensively diffuses agroforestry and other natural resource management practices.
- Funded by ACIAR, in Manafwa and Kapchorwa, ran "innovation platforms" that supported milk, honey and coffee value chains: 19 project nurseries produced 350,000 seedlings, and 28 community scientists measured impact.
- Contributed to Uganda's Vision 2040 by providing guidance on the restoration of degraded lands with tree.
- Maintained sustained input into the National Agroforestry Strategy.



Uganda has multiple agroforestry systems including (L) in the North, allowing indigenous trees to grow among crops, (centre) In Central Uganda, coffee agroforestry with Ficus natalensis and fruit trees, and (R) in Bundibugyo cocoa growing with Maesopsis eminii.

CIFOR-ICRAF



Challenges include erosion/landslides on slopes, overharvesting of Borassus for hives, urban need for charcoal. Opportunities include native trees (Kigelia and Strychnos) retained on farm and a population that cherishes its agrobiodiversity. Photos from Kasese, Kabermaido, Terego, Arua.

Select projects

Funded by the Bill and Melinda Gates Foundation, the East Africa Dairy Development programme (2008-2018) was a major agroforestry research and development success. In Kiboga, Mityana, Wakiso, Kampala, Mukono and Jinja, it supported smallholders earning less than USD 2 a day to boost milk production. In Phase I, dairy income per household per day increased by 164%. ICRAF promoted improved fodder, which not only increased milk production but also generated higher-quality manure. Working through dairy producer organizations, ICRAF developed the farmer trainer model to provide extension services to members. The project's impact has been longstanding. https://www.ciforicraf.org/knowledge/publication/11841/

Funded by the Austrian Development Agency, Gender, tenure and community forests (2010-2013) and Strengthening women's tenure rights and participation in community forestry: Consolidation of research and action (2011–2016) worked with communities to increase women's participation in forest user groups. CIFOR and partners deployed Adaptive Collaborative Management to help groups identify joint problems, envision goals and act on them. In six sites in Rakai, Masaka, Mpigi and Wakiso Districts women became chairpersons of groups managing natural resources. https:// forestsnews.cifor.org/48873/moving-theneedle-advancing-gender-equality-inuganda?fnl=

Funded by the International Fund for Agricultural Development (IFAD), Agrobiodiversity and landscape restoration for food security and nutrition in Eastern Africa (2016–2019) was co-led by ICRAF and Bioversity International. With NaFORRI and communities, it co-created food-tree portfolios of 10–12 species so that households have at least one tree producing in any month for year-round micronutrients. It included pantropicals, such as jackfruit, but also indigenous ones, such as *Vangueria apiculata*. The project established 38 on-farm demonstrations and mother blocks with improved material at Bukalasa Agricultural College and Nakasongola's Our Lady of Lourdes Parish to provide genetic resources for scions for grafting. https://link.springer. com/article/10.1007/s12571-019-00970-7

Funded by Germany's International Climate Initiative (IKI), Harnessing the potential of trees-on-farms for meeting national and global biodiversity targets (2018–2022) advocated that agriculture become a force for biodiversity. Achievements included recognition of trees on farms in Uganda's Sixth National Report to the Convention on Biological Diversity, which states that they can provide "important corridors connecting areas of high biodiversity." Also, a pilot with 500 farmers showed that performance-based contracts can lift the survival rates of planted trees to almost 75%. https://treesonfarmsforbiodiversity.com/

Funded by a joint venture of HSBC and Pollination, **Restoring landscapes and livelihoods in Uganda** (2023–2027) is CIFOR-ICRAF's first carbon project in Africa and aims to boost the livelihoods of 352,500 smallholder households with 'gold standard' restoration practices, including farmer managed natural regeneration.

> The farmer trainer approach has revolutionized our perspective on agricultural extension services. It enables farmers to educate their peers.

> > - Dr Evelyne Kiptot rural advisory services expert

In 2024, it assessed 297 nurseries, noting a severe shortage of native tree seedlings and "limited number of mother trees." Three impressive nurseries will be upgraded into Rural Resource Centres in Kamwenge, Nakapiripirit and Kiboga. https://www.evergreening.org/ restoreafrica/

Funded by IKI, Right tree in the right place (RTRP) - Seed (2023-2029) is helping ensure availability of native tree seed for Uganda's forest landscape restoration target of 2.5 million ha by 2030. "Uganda has been extremely successful in commercial forestry," states CIFOR-ICRAF scientist Lars Graudal. "Now, native species need attention, too." Prioritizing about 120 species, the project will develop seed sources in breeding seed orchards. Uganda has 854 indigenous tree species, 55 of which are threatened. https://www.cifor-icraf.org/ news/corporate-news/bringing-nativetrees-back-to-african-landscapes/

Funded by the Green Environment Fund, Promoting integrated landscape management approach for conservation of the Mount Elgon ecosystem in Eastern Uganda (2024-2028) has ICRAF providing data on Integrated Land Management and the importance of trees on farms. Analysis of forest cover showed urgent need in Buluganya Subcounty, which suffered a severe landslide after heavy rains in November 2024.

Funded by IDA-World Bank, Intensive mixed use agroforestry systems on household plots (2025–2026) addresses farmers in districts with substantial refugee populations. ICRAF will work in West Nile sub-region to deliver inclusive agroforestry – with rigorous technical specifications, monitoring of tree growth, and a business case that provides market-based solutions and incentives for farmers.



Focused on people and nature: a vanilla farmer explains that theft of the crop is rampant; CIFOR-ICRAF prioritizes seed; the nursery in West Nile supplying refugees; the office in Mukono; a community meeting on shea parklands in Otuke.

Resources

Agroforestry handbook for the montane zone of Uganda (2003) provides timeless guidance for an agroecological zone making up 23% of Eastern and Central Africa's total area and hosting more than 50% of its people. https://www.cifor-icraf. org/publications/downloads/Publications/ PDFS/B16763.pdf

Enhancing farm tree diversity as a means of conserving landscape-based biodiversity: Insights from the Kigezi Highlands, Southwestern Uganda (2005) reports on a study of 80 farms that found that farmers had planted 50% of the trees, of which 31% were indigenous, a subset of the 324 woody species found in the mountain gorilla home Bwindi Impenetrable National Park. https://www.cifor-icraf.org/publications/ downloads/Publications/PDFS/ja05064.pdf

Ambition of CIFOR-ICRAF

With Uganda's increasing population,

natural resources to meet subsistence

needs, resulting in a marked increase

in deforestation and biodiversity loss.

high use pressure is inevitably exerted on

Agricultural expansion is the main driver.

At the same time, smallholder farmers

who depend on rain-fed agriculture are

particularly vulnerable to the impacts of

The roles of trees on farms in Uganda: Current status and policy recommendations for future development (2020) states that although 90% of smallholders grow and protect trees on farms (TonF), TonF do not appear in national statistics or natural capital accounting. TonF should be incentivized, integrated in legislation, embraced for mitigation/ adaptation, and promoted, including in extension, says the policy brief.

Tree-based solutions in the refugeehosting landscapes of Northwestern Uganda 2017 to 2025: A case study and guidance (2025) documents CIFOR-ICRAF's first project with refugees, which demonstrated that displaced people will plant trees, taking pressure off natural vegetation, while providing fruit, windbreak, shade, and income. The project distributed over 700,000 seedlings of about 30 species, half of which were indigenous. An estimated

climate change but lack the capacity to address them.

CIFOR-ICRAF Uganda aims to be partner of choice offering people-centred naturebased solutions that deliver the benefits of trees and forests. Agroforestry can increase farm productivity, while supporting biodiversity and sustainable natural resource use and management.

CIFOR-ICRAF Uganda aims to increase its capacity to offer expertise on soil and

60% survived, many of which have since been repeatedly pruned for fuelwood and coppiced. Tree-based refugee hosting landscape: A case study and guidance. See also Evaluative report on CIFOR-ICRAF programming with refugees and hosts in northwestern Uganda.

Given the choice of a well-thought-out assortment of trees, seedling delivery near their homes, as well as training and support, refugees routinely planted 30-40 trees on their small plots.

> – Phosiso Sola CIFOR-ICRAF senior scientist and refugee project lead

water conservation; resilience through tree diversity; seed and seedling systems; carbon; agroforestry value chains; gender mainstreaming and more. Its research-indevelopment trials will inform decision making.

Our approaches support the country in achieving its Vision 2040 agenda.

> – Erik Acanakwo CIFOR-ICRAF country representative

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The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) harnesses the power of trees, forests and agroforestry landscapes to address the most pressing global challenges of our time - biodiversity loss, climate change, food security, livelihoods and inequity. CIFOR and ICRAF are CGIAR Research Centers.

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