



CIFOR-ICRAF COUNTRY PROFILE

Ethiopia

2024

About Ethiopia

Teetering for centuries on the edge of drought and with periodic famines recorded as far back as 1540, Ethiopia is ground zero for dryland restoration. No country in the world has done more.

Among its remarkable stories is Abreha We Atsbeha, which transformed from a village beset by hardship and facing the out migration of its youth to a well-watered ecosystem able to sustain its people.

“The whole community worked day and night to protect the land from free grazing cattle and to treat the whole catchment with trees,” says Gebremikael Gedy, the remarkable leader who led the recovery and is also known as Aba Hawi. “We held on to the water and improved underground recharge. Because of that, farmers are earning a lot from vegetables, livestock fattening, and dairy.”

In 2012, the village won the Equator Prize, which the United Nations Development Programme awards to outstanding community efforts to reduce poverty through the conservation and sustainable use of biodiversity.

The landlocked nation boasts other superlatives. As the country of origin for wild coffee, it is Africa’s biggest coffee producer and the world’s third-largest producer of Arabica. It is Africa’s second-most-populous country after Nigeria, with about 123 million people. It also has Africa’s largest livestock population. It is immensely diverse with 18 agroclimatic zones, ranging from cold Alpine forests to hot, dry lowlands. Its highlands are Africa’s largest continuous area of elevation, rarely falling below 1,500 metres and with five peaks over 4,000 metres.

Much is happening to protect Ethiopia’s natural heritage. Between 2019 and 2022, its Green Legacy Initiative coordinated the planting of billions of tree seedlings. Its Ten-Year Development Plan (2021–2030) aims to strengthen the conservation of forests, biodiversity, and wildlife. Its Nationally Determined Contributions (NDCs) intend to reduce greenhouse gas



In the community of Abreha We Atsbeha, trees that farmers have protected and assisted to regenerate flourish in a lush field. Photo by Niguse Hagazi/CIFOR-ICRAF

(GHG) emissions by 277.7 Mt CO₂e, and its Climate-Resilient Green Economy Strategy pledges to restore more than 20 million hectares of degraded land.

But it is still not easy. Over 75% of its people live outside towns and depend entirely on natural resources. More than 40% of its natural resource base is already degraded, and an additional 20% is under threat. According to the United Nations, Ethiopia hosts the third highest number of refugees (972,000 as of February 2024) in Africa after Uganda and Sudan, which increases the pressure. Agriculture, forestry, and other land uses account for nearly 80% of its GHG emissions.

Improving Ethiopia’s tree cover, soil health, and ecological resilience is imperative for its people. And the need for this goes far beyond its borders: the strategic Horn of Africa country is the source of the Blue Nile, which is the lifeline for the sustenance of Sudan and Egypt, while the Shebelle and Jubba rivers also cascade from its peaks and sustain agriculture in Somalia.

“ CIFOR-ICRAF Ethiopia’s ambition is to improve lives while conserving and enhancing biodiversity. ”

– Niguse Hagazii

CIFOR-ICRAF country director

CIFOR-ICRAF in Ethiopia

For over 35 years, CIFOR-ICRAF has functioned in Ethiopia as a trusted science and development partner with insights that few other organizations possess. From supplying improved avocados to boost incomes in Ethiopia’s Hadiya zone, to helping revive struggling government tree nurseries to be placed in the hands of youth in Tigray, to supporting a new national seed system to meet restoration targets, CIFOR-ICRAF has been pertinent.

Led by country director Niguse Hagazi, CIFOR-ICRAF Ethiopia has solid, up-to-date research at the ready for application. When a donor recently asked about refugees, Hagazi pointed to a 108-page report by CIFOR-ICRAF. “Yes, we conducted a baseline for four refugee areas,” he replied. “Our proposed activities aim at strengthening self-reliance through enhanced livelihoods, access to clean energy, and restoring degraded areas.”

The CIFOR-ICRAF team also provided fresh analysis at the request of a project investor who knew that Ethiopian coffee was grown in agroforestry systems that help preserve forest and biodiversity. Indeed, much coffee in Ethiopia is grown under the shade of companion trees that make air temperatures 4°C cooler, while mitigating climate change. But what is less well known is that those agroforestry

systems are degrading; losing local food species, like *enset* (*Ensete ventricosum*); and moving away from indigenous trees to fast-growing exotics.

“Tree species composition is changing, while tree density and keystone species are declining, threatening resilience and long-term sustainability,” explained the CIFOR-ICRAF team. “Forests and the wild Arabica coffee genotypes are disappearing as farmers abandon coffee for more lucrative crops or replace traditional varieties with improved ones.”

This information enabled the investor to be more strategic.

“ CIFOR-ICRAF Ethiopia makes complexity manageable for government, international bodies, the private sector, and communities. ”

– Niguse Hagazii
CIFOR-ICRAF country director

Results on the ground

- Set up over 20 Rural Resource Centers (RRCs), often owned by landless youth, bringing services and germplasm closer to farmers.
- Established 53 tree seed orchards to produce high-quality seeds of 22 tree species, 13 indigenous, for forest landscape restoration and planting.
- Strengthened tree seed centres: one national and four regional

Major achievements

- Promoted cost-effective restoration practices that add value to degraded landscapes

- Contributed to science of “exclosures,” areas where livestock are excluded and people may only carry out grass, helping recovery of woody vegetation
- Supported sustainable forest and farming practices, particularly agroforestry, which improves agriculture while alleviating pressure on natural resources
- Empowered and equipped partners to scale restoration and agroforestry
- Informed and influenced the 2007 Forest Law, which came into effect as Ethiopia’s new National Forest Law in 2018. Designed to prevent and reverse deforestation and forest degradation, it recognizes the rights of communities and acknowledges their role in managing natural forests and establishing plantations. “This is a big shift from previous legislation.” Habtemariam Kassal, Principal scientist CIFOR-ICRAF Ethiopia
- Was pivotal in establishing the Ethiopian Soil Information System (EthioSIS/ATA) and soil-plant diagnostic spectral labs, thereby contributing to better soil management and more informed decision-making
- Contributed to the development of the National Drylands Restoration Strategy <https://www.decadeonrestoration.org/publications/ethiopian-national-drylands-restoration-strategy>

Quick facts

- Over 30 staff, among them 15 scientists with master’s degrees and PhDs.
- CIFOR-ICRAF has had 20 projects since 2018, the year before the two institutions began their merger.



CIFOR-ICRAF seed scientist Abraham Abiyu in a seed breeding orchard of *Grevillea robusta*

Select projects

- Funded by the UK Department for Environment, Food and Rural Affairs, **Multifunctional agroforestry for enhanced biodiversity, improved livelihoods and resilient landscapes in Ethiopian highlands (2024–2027)** seeks to catalyse the adoption of agroforestry for a more biodiverse future that supports livelihoods and reduces poverty. The project aims to support farmers to move from monocropping to agroforestry systems that mix crops with the “right tree for the right place”.. Partners include the Global Centre on Biodiversity for Climate; CIFOR-ICRAF; Royal Botanic Gardens, Kew; Tree Aid; Ethiopian Forestry Development; Ethiopian Biodiversity Institute, and four universities. <https://www.gcbc.org.uk/project/multifunctional-agroforestry-for-ethiopia/>

L-R: Women in Ethiopia play a major role in managing natural resources. From L to R: a young woman sells tree foods, including fruit of *Cordia africana*; a woman brings home firewood; a young mother sorts seed of *Milletia ferruginea* at the Dima Tree Seed Processing and Storing Centre, which CIFOR-ICRAF supports under PATSPO. Photos by Cathy Watson/CIFOR-ICRAF





L-R: creating terraces which are then vegetated; exclosures from which local people are allowed to take only grass and leaves; production of seedlings at a Rural Resource Center to be planted out; retaining water with gabions and valley dams. Photos by CIFOR-ICRAF

- Funded by the Norwegian Ministry of Foreign Affairs, **REDD+ investment programme phase II (RIP II)** (2023–2026) is implemented by Ethiopian Forestry Development and aims to help reduce poverty in communities in and around natural forests and rehabilitated landscapes while ensuring that Ethiopia's carbon-rich forests receive technical, legal, and logistical support. The programme is supporting participatory forest management cooperatives in 134 districts (*woredas*) in six regional states. With 110,000 households set to directly benefit, activities include certification of forest land; establishing buffer zones around natural forests; planting diverse indigenous tree species; strengthening knowledge management systems; undertaking needs-based capacity building; addressing cross-sectoral gaps in policies and plans; and improving policy alignment and sectoral coordination. CIFOR-ICRAF's role as a technical partner is scaling up good practices to maximize conservation and livelihood gains; bringing relevant international practices and lessons from forestry research to inform programme planning and implementation; building the capacity of national partners to engage in development-oriented forestry action research to help bridge the forestry-development gap; and strengthening value addition and processing of forest products.
- Funded by the Norwegian International Climate and Forest Initiative (NICFI) through the Royal Norwegian Embassy in Ethiopia, **Provision of adequate tree seed portfolios (PATSPo)** (2017–2025) was set up by the Government of Ethiopia and CIFOR-ICRAF to address the profound problem, shared by other countries, that Ethiopia, though determined to restore its land, did not have the supply of genetically diverse, healthy tree seed needed to produce the required number of quality tree seedlings for its large land restoration targets. The traditional seed-supply programmes focused on relatively few species and collected seed from trees of largely unknown genetic quality. Much has now changed. While PATSPo I documented hundreds of seed sources, grew national capacity to manage seed, equipped seed centres, and started establishing breeding seed orchards (BSOs) and seedling seed orchards (SSOs), PATSPo II is building on this. Today it has 53 seed orchards of 22 priority tree species, thirteen of which are indigenous: each orchard is 1.5 ha in size. PATSPo II is continuing to raise awareness of the need to produce, collect, and use quality seed and conduct training for partner staff, seed dealers, and farmer groups to collecting tree seed. Gender aspects of tree seed procurement are the new area of PATSPo training. Without doubt, the "gold standard" seed project in the world, PATSPo is now being replicated in four other countries in Africa. See [Provision of Adequate Tree Seed Portfolio in Ethiopia \(PATSPo II\): Phase 2 | World Agroforestry | Transforming Lives and Landscapes with Trees](#).
- Funded by the David and Lucile Packard Foundation, **Engagement of rural young people in tree-based value chains and cascading of the watershed and agroforestry platform** (2023–2025) addresses youth unemployment in Ethiopia. The project established gender- and youth-responsive tree value chain enterprises at three new RRCs, promoted quality planting materials of four avocado varieties, engaged Mettu University to establish mother blocks as sustainable scion sources, and demonstrated that RRCs could generate income for unemployed youth and women. Group earnings were about USD 2,500 a year, while individual earnings were about USD 190 per year. <https://worldagroforestry.org/blog/2023/07/14/youth-green-jobs-set-course-better-future-ethiopia>
- Funded by the United Nations Environment Programme (UNEP) and the Swedish government (2019–2023), **Institutional Strengthening for Catalysing Forest Sector Development in Ethiopia** tackled the conundrum that while Ethiopia aims to increase forest cover from 15.5% today to 30% by 2030, agricultural expansion is expected to cause the loss of nearly 9 million hectares of forest. Under the project, CIFOR-ICRAF and the Swedish University of Agricultural Sciences conducted action-oriented research with farmers transitioning to tree-based livelihoods and developed – with the Ethiopian Cooperative Commission – guidelines for forest-focused cooperatives, which were introduced to forestry officers at regional state and federal state level.
- Funded by Irish Aid, **Enhancing integrated watershed management with climate-smart agriculture and NRM practices in Gergera watershed** (2014–2018) and **Developing an innovation and learning platform for enhanced economic opportunities and resilience in Gergera watershed: Action research programme** (2018–2022) combined multiple restoration approaches such as tree growing, terrace making, and gully blocking over eight years. This led to significant and positive economic, social, and ecological changes for a community that wanted to be settled elsewhere as collapsing riverbanks took their fields. It also led to the formation of Ethiopia's National Watershed and Agroforestry Multi-Stakeholder Platform. <https://www.cifor-icraf.org/publications/pdf/guide/Gergera-Watershed.pdf>



L-R: Ethiopia has multiple traditional agroforestry systems. Coffee agroforestry with beans, *enset* and and overstory trees; food crops with *Moringa stenopetala* trees; and trees in fields of teff, an annual grass cultivated for its seeds. Photos by Cathy Watson and Mulugeta Mokra/CIFOR-ICRAF

Resources

What to Plant Where in Ethiopia, 2023, is an app that allows users to select suitable tree species and their best-matching seed sources at any planting location. The seed sources are all from Ethiopia's National Tree Seed Source Registry, developed with support from PATSPO. https://patspo.shinyapps.io/WTPW_ETH/

In Ethiopia, cultivating hope through tree seed orchards, 2024, is a useful fast read about the difference between breeding seed orchards (BSOs) and seedling seed orchards (SSOs), and why both are needed. <https://www.cifor-icraf.org/knowledge/news/87048/>

Development of conservation plans of priority indigenous tree species in Ethiopia, 2023, lays forth the process required to conserve *Juniperus procera*, *Hagenia*

abyssinica, *Boswellia papyrifera*, *Afrocarpus falcatus*, and *Cordia africana*, the first three of which are endangered. <https://www.worldagroforestry.org/output/development-conservation-plans-priority-indigenous-tree-species-ethiopia>

Church forest and green corridor methodology, 2020, addresses the preservation of Ethiopia's church forests, noting that "planting exotic tree species inside church forests should be avoided. We protect church forests because of their natural and cultural heritage. The natural heritage depends on the last remaining natural forests in Ethiopia, which we should not replace with exotics." <https://www.kirkensnodhjelp.no/contentassets/e52947ecb1b4a53a6e438e6b0b2c887/church-forests-and-green-corridor-methodology-2020.pdf>

REDD+ in Ethiopian silvipastoral systems: effects on vegetation, livelihoods and wildfire risk, 2019, reports that livestock prevent fire by consuming surface fuel. <https://www.cifor-icraf.org/knowledge/slide/14353/>

Dieback affects forest structure in a dry Afromontane forest in northern Ethiopia, 2010, and *Tree dieback affects climate change mitigation potential of a dry Afromontane forest in northern Ethiopia, 2015*, describe the alarming loss – due to rising temperatures – of foundation species *Juniperus procera* and *Olea europaea* that together constitute 67% of individual trees in Desa'a forest, Tigray region. <https://www.sciencedirect.com/science/article/abs/pii/S0140196310003514> and <https://doi.org/10.1016/j.foreco.2015.02.008>

Ambition of CIFOR-ICRAF In Ethiopia

Using forests, trees and agroforestry as entry points, CIFOR-ICRAF Ethiopia plans to create more resilient landscapes by producing and disseminating actionable evidence and solutions to challenges such as climate change, extreme inequality, and unsustainable energy systems.

The Ethiopia team aims to build the capacity and knowledge of farming

communities, with special emphasis on women and youth. It will focus on private- and public-sector decision makers, providing context-specific and action-oriented training, while contributing to strategies, regulations, and proclamations, along with their implementation.

By 2030, the team aims to publish and disseminate more than 150 peer-reviewed articles, chapters, guides, manuals, briefs, and blogs; to

mobilize about USD 20 million; and to strengthen or establish 50 existing or new partnerships.

CIFOR-ICRAF Ethiopia envisions reaching more than 500,000 people and restoring 250,000 ha of land.

“ Our plans are big ”

– Niguse Hagazi
CIFOR-ICRAF country director

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CIFOR-ICRAF

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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