RESEARCH PROGRAM ON Forests, Trees and Agroforestry

Farmers tend to a pepper garden in Southeast Sulawesi, Indonesia. Photo by Yusuf Ahmad/ICRAF

**What is the landscape approach?** As it relates to agriculture, forestry and other land uses, and to the livelihoods they sustain, the landscape approach transcends traditional management and governance boundaries, seeking to provide tools and concepts to identify, understand and address a complex set of environmental, social and political challenges, and to enable evidence-based and inclusive prioritization, decision-making and implementation.

## CGIAR Research Program on Forests, Trees and Agroforestry (FTA)

# Landscape approaches to tackle climate change, and achieve sustainable development and food security

Forests, trees and agroforestry produce food, fibers, energy, water and ecosystem services, and are required to maintain biodiversity and adapt to and mitigate climate change.

An estimated 1.6 billion people depend on forests and trees, including trees on farms, for their livelihoods. Among them are poor and marginalized groups, while indigenous peoples are proportionally more dependent on the goods and services that forests and trees provide.

Forests and trees are needed to contribute to the Paris Agreement and to the achievement of 14 of the Sustainable Development Goals (SDGs), responding to multiple demands linked to the objectives of reducing poverty, improving food and nutrition security, promoting sustainable agriculture, addressing climate change, protecting natural resources, improving ecosystem services and contributing to sustainable production and consumption.

With improved management, transformed governance, and new institutional arrangements involving public and private actors, forests, trees and agroforestry have the potential to address these challenges, thereby directly contributing to achieving the SDGs.

They can play a central role in improving production systems; securing people's livelihoods, resilience and food security, including for young and marginalized people; and promoting the equitable distribution of benefits.

FTA research aims to better understand these roles, solutions to enhance them — technical options, management, governance, policies — and to enable actors to unlock the potential and maximize the benefits that trees can bring.

# Impact stories

## Fallow forestry's inclusion in Peruvian policy improves rural incomes

In Peruvian Amazon villages, many farmers manage the fast-growing species *Guazuma crinita*, known as *bolaina*, which seeds itself into crop fields going to fallow. They produce significant amounts of lumber on their farms, or agricultural fallows, that are sent to Lima for prefabricated houses.

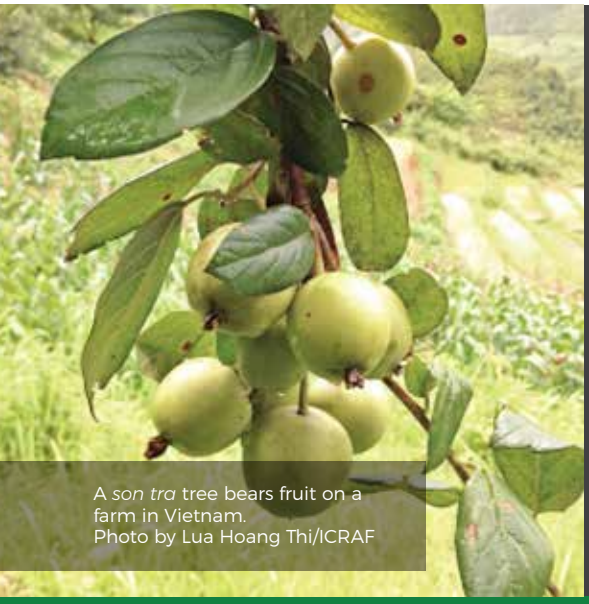
How the timber produced by these smallholders should be regulated is a tough and interesting question. Is it or is it not a plantation? Are the regulatory and institutional frameworks in the Peruvian forestry sector supportive of on-farm timber production, in any of its forms? That is where science and public policy can come together.

FTA researchers argued that the fallow forestry system was a type of plantation, which should be included in Peru's forest policy regulations, so that smallholder farmers could increase income from their sustainable forestry systems and, as a result, the country could increase its production of legal timber.

FTA's research eventually led to a change in the legal definition of agroforestry in Peru, allowing farmers to sell timber legally from their fallow plots, positively affecting 2 million people and 4.5 million ha in the Peruvian Amazon.

Read more at: blog.cifor.org/fta/31139

A grower assesses *bolaina* trees in an agroforestry system in Peru.
Photo by J C Huayllapuma/CIFOR



A *son tra* tree bears fruit on a farm in Vietnam.
Photo by Lua Hoang Thi/ICRAF

## Research adds value for *son tra* farmers

*Son tra* (*Docynia indica*) is an indigenous fruit tree species growing naturally in forests around the Himalayas.

In 2013, FTA researchers from the World Agroforestry Centre (ICRAF) teamed up with the National Institute of Medicinal Materials in Hanoi, Vietnam, and identified in the fruit the essential bioactive substances of polyphenols, which are key human dietary antioxidants, and triterpene acids, which have anti-inflammatory and antitumor properties.

FTA has grown the market for *son tra* through developing and commercializing novel products to overcome difficulties in consuming it fresh, allowing prices to be maintained while supply increases because more farmers are growing the fruit.

Read more at: blog.worldagroforestry.org/6625

## Out of the woods: Timber market regulation

For decades, Cameroon's forest policy focused on large-scale forest concessions mainly oriented toward Western markets. Neither the volume of timber sales in the local market nor the national consumption of sawn wood was recorded in official statistics.

FTA's intervention through the Center for International Forestry Research (CIFOR) influenced the drafting and implementation of a new policy manual on the national timber market.

The project reviewed existing scientific literature and technical documents, putting the regulation of the local market at the top of the agenda, resulting in a large debate among stakeholders.

As a member of the official task force on the domestic timber market, CIFOR provided insights on integrating the national timber market into the ongoing review of the forest law.

Read more at: blog.cifor.org/fta/47684

A woodseller trades at Montée Parc Market in Yaoundé, Cameroon.
Photo by O Girard/CIFOR

# Our research areas

FTA research and solutions address challenges from landscapes to livelihoods by developing, providing and promoting evidence-based solutions for farmers, foresters, practitioners, value chain actors and policy makers. This covers five areas, or flagships:

1. Tree genetic resources to bridge production gaps and promote resilience
2. Enhancing how trees and forests contribute to smallholder livelihoods
3. Sustainable value chains and investments for supporting forest conservation and equitable development
4. Landscape dynamics, productivity and resilience
5. Forests, trees and agroforestry for climate change adaptation and mitigation

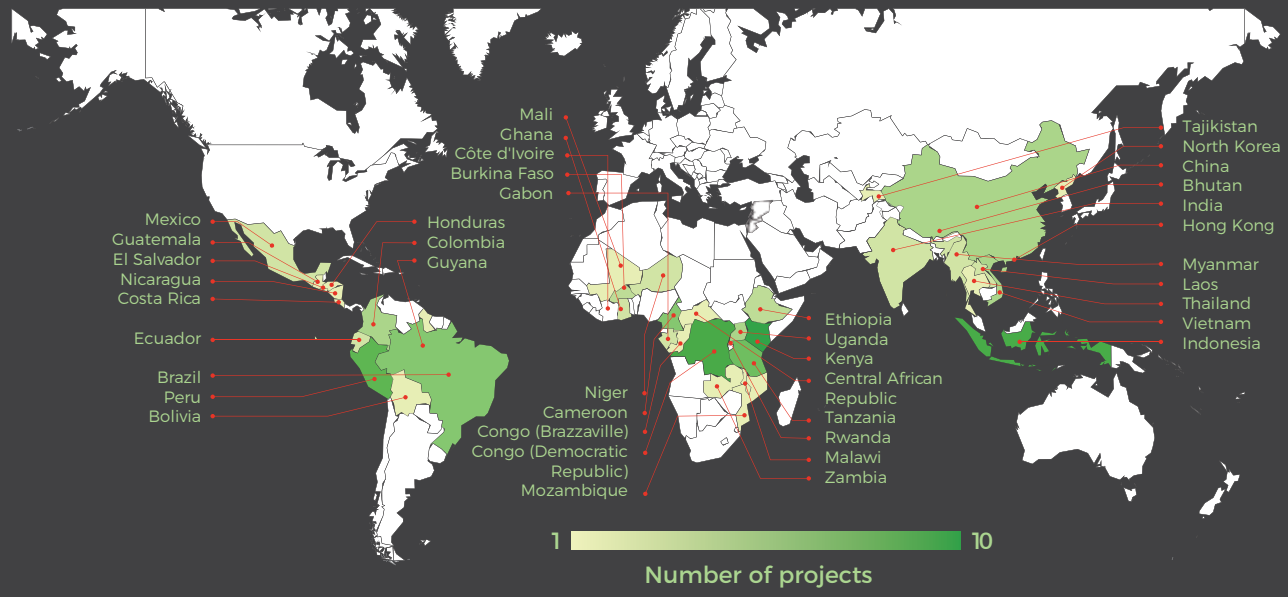
FTA research tackles a variety of contexts, applicable to many situations. It produces integrated, high-impact datasets and tools to support decision-making.

It also supports and organizes multi-stakeholder dialogues at local, regional and global levels.

Furthermore, it looks at gender equality through analyzing structural barriers and drivers of change.

# Where we work

## 118 projects in 41 countries in 2017




# Impacts by 2022

FTA organizes research spanning the whole spectrum of the "theory of change," linked to impact pathways, from upstream research to the enabling environment (institutions, policies, governance) for development and scaling-up.

FTA research focuses on the needs of key users and beneficiaries. It develops methods to ensure that the conduct and outcomes of research are gender sensitive and that capacity exists to use outputs.

The research design includes monitoring, evaluation, learning and impact assessment (MELIA) approaches. This supports continuous learning and self-reflection, thus improving effectiveness in achieving outcomes and impacts.

By 2022, FTA aims to contribute to improved practices and policies that would lead, together with the joint efforts of partners, to achieving the following development outcomes.

- **31 million** more farmers and smallholder households practicing more efficient and sustainable farming with improved crop and tree varieties
- Trend of **0.225% per year increase** in either water or nutrient use efficiency in forest, tree and agroforestry systems
- **19 million people** 50% women, supported to lift themselves out of poverty
- **17 million people** 50% women, meeting minimum dietary requirements or having improved diets
- Trend of yields increasing by **0.18% per year** in forest, tree and agroforestry systems
- **30 million ha** of degraded land area undergoing restoration
- **2.5 million ha** of deforestation avoided
- Greenhouse gas emissions from forests, trees and agroforestry reduced by **0.2 gigatons** (Gt) $CO_2$ per year, thereby contributing to avoiding environmental damage

# Key issues

Much of the progress in overcoming poverty and hunger has been at the expense of natural resources. Forests and trees have been hit particularly hard, including being destroyed for agriculture and other economic activities. If this trend is not reversed, the future of agriculture, nature and humanity itself will be threatened.

However, as FTA shows, forests, trees and agroforestry offer several pathways toward achieving the SDGs and the Paris Agreement on climate change, to enable the world to shift its development trajectory away from a 'doomsday scenario' toward real sustainability.

FTA research has unique features that derive from the need to adopt a systemic approach (from natural resources, economics, social and institutional factors) to the problems at hand, and from the need to work at different levels and scales, from landscapes to households.

FTA fills a specific role in the overall CGIAR portfolio as the only program that works on all aspects of the value and benefits of trees and forests for agricultural landscapes and sustainability as linked to agricultural development.

It complements the other agri-food programs for production systems and contributes to CGIAR's integrative programs for policies, institutions and markets, nutrition and health, ecosystem services and climate change.

# Global goals

Forests, trees and agroforestry provide solutions from a technical level to policy and governance that positively impact landscapes, ecosystems, people's livelihoods and food security, sustainable production and consumption. FTA strives to build and promote strong partnerships. Through these and several other pathways, FTA's research contributes to 14 of the SDGs.


# Partners

**Led by:**

CIFOR

**In partnership with:**

Bioversity International

CATIE
Solutions for environment and development
Soluciones para el ambiente y desarrollo

cirad
AGRICULTURAL RESEARCH FOR DEVELOPMENT

INBAR

TROPENBOS INTERNATIONAL

World Agroforestry Centre

# Contact us

**CGIAR Research Program on Forests, Trees and Agroforestry**

Jalan CIFOR, Situ Gede, Sindang Barang, Bogor Barat
Bogor 16115 Indonesia

**Telephone:** +62-251-8622-622 |**Email:** cgiarforestsandtrees@cgiar.org

CGIAR RESEARCH PROGRAM ON Forests, Trees and Agroforestry

foreststreesagroforestry.org

The CGIAR Research Program on Forests, Trees and Agroforestry (FTA) is the world's largest research for development program to enhance the role of forests, trees and agroforestry in sustainable development and food security and to address climate change. CIFOR leads FTA in partnership with Bioversity International, CATIE, CIRAD, INBAR, Tropenbos International and the World Agroforestry Centre.

We would like to thank all donors who supported this research through their contributions to the CGIAR Fund.
on.cgiar.org/CGIARFundDonors