Several turning points offered new hope in 2021: the slowing of the Covid-19 pandemic through widespread (albeit unevenly distributed) vaccination, the launch of the UN Decade on Ecosystem Restoration, and the historic Glasgow Leaders’ Declaration on Forests and Land Use.

CIFOR-ICRAF also marked two critical turning points: the successful completion of our three-year merger process and of the 10-year CGIAR Research Program on Forests, Trees and Agroforestry (FTA). Led by CIFOR-ICRAF in collaboration with partners, FTA’s contributions have resulted in millions of hectares of forests under restoration and better protection – and millions of people with improved food security and nutrition and the means to exit poverty.

Now fully merged, CIFOR-ICRAF is generating more evidence of the transformative potential of trees and forests, with our research consolidated into five integrated themes (trees, climate, soils, markets and governance). Our three holistic approaches – Transformative Partnership Platforms, Engagement Landscapes, and Flagship Products – are leveraging resources and partnerships across Africa, Asia and Latin America. We finished the year with a project pipeline of USD 430 million and harmonized internal management. We are making strong progress towards our Gender, Diversity and Inclusion goals and we now have a dynamic new website (cifor-icraf.org). We have also launched a recruitment process for a Chief Executive Officer to take CIFOR-ICRAF to the next level.

This report shines a light on some of our solutions to five global challenges: deforestation and biodiversity loss, climate change, dysfunctional food systems, unsustainable supply and value chains, and inequality. Achievements include informing national policies in Peru and Viet Nam, applying new technologies in the Congo Basin and India, and co-creating solutions with partners and communities in Indonesia and Cameroon, all while integrating considerations of the rights of women, Indigenous Peoples and vulnerable rural communities.

Exciting new projects launched in 2021 include Trees Outside Forests in India (TOFI) supported by USAID and the Agroforestry and Restoration Accelerator in Brazil in partnership with The Nature Conservancy and Amazon Inc. 1.5 billion people have been connected through the Global Landscapes Forum, which continued to break new ground – most notably at the UN climate conference in Glasgow, which had over 1 million session views from 140 countries. And Resilient Landscapes is fast becoming a nexus between science and business, finance, government and civil society, with new projects starting in Papua New Guinea, Serbia and Brazil.

As Chair of the Board Claire O Connor passes the baton to welcome Professor Getachew Engida, CIFOR-ICRAF now stands as one organization forged through shared values. Thanks to the generous support of our funding and strategic partners and the tireless efforts of our over 700 staff, we are well on our way to implementing our theory of change and realizing our vision of a more equitable world where forest and agroforestry landscapes enhance the environment and well-being for all.
Worldwide presence

CIFOR-ICRAF operates across 64 countries, with offices in 25 countries. We currently have 739 staff and 192 active projects. Our decades-long host country agreements with Indonesia and Kenya reflect their global leadership and deep commitment to forests, trees and agroforestry.

Reach

927 publications
2.5M publication downloads
50k citations

5.6M website page views
305M reached on social media
3.7k media articles

Partnership

We are deeply grateful for the financial support of our funding partners and the collaboration of our strategic partners. For more information see page 22.

159 funding partners
281 strategic partners

CIFOR-ICRAF expenditures 2021

$85.7M total expenditure in 2021

For more information see page 21.
Global challenges — and how to tackle them

Our planet and the people who live on it are in the midst of a perfect storm of five interconnected global challenges: deforestation and biodiversity loss, climate change, dysfunctional food systems, unsustainable supply and value chains, and inequality. Because each crisis affects the others, solving them requires whole-system responses that consider how all people are affected and the environment is impacted over time.

Transdisciplinary science at CIFOR-ICRAF not only delivers holistic solutions but also ensures their relevance to national programmes and local communities, as shown throughout this report. By supporting local innovation rather than helicoptering in solutions from outside, we embrace cutting-edge science while working hand in hand with global, national and local communities to co-create and scale solutions that meet their needs.

We operate transformative research. For example, we seek not only to understand how gender inequity compromises sustainable development, but also to shift power asymmetries to create a more equitable future for both men and women.

– Fergus Sinclair, Chief Scientist
Our way of working

CIFOR-ICRAF is focused on contributing to a decisive shift in global trajectories: from a future of environmental destruction and livelihood crises to one of prosperity and planetary health. Uniquely equipped to deliver transformative research, we harness the power of science and innovation to improve the benefits that forests, trees, soils and their sustainable management can provide to all humankind, for a more resilient, equitable and prosperous future. Our work is aligned with the Sustainable Development Goals and the Paris Agreement, as well as the three Rio Conventions.

We continue to implement our 10-year strategy (2020-2030), working across five broad themes: Trees and forest genetic resources and biodiversity; Climate change, energy and low-carbon development; Soil and land health; Sustainable value chains and investments; and Governance, equity and well-being.

CIFOR and ICRAF are members of CGIAR, a global research partnership for a food-secure future (see p. 16).

In this report, find out what CIFOR-ICRAF is doing to create:

1. Thriving, diverse forests and farms
2. Climate-resilient ecosystems and communities
3. Sustainable, vibrant food systems
4. Green, equitable supply and value chains
5. Inclusive, rights-based participation

Our innovations

CIFOR-ICRAF delivers game-changing solutions to global and national challenges through three innovative approaches that are catalysing a positive shift in research for development across Africa, Asia and Latin America:

- **Transformative Partnership Platforms** – alliances focused on critically important challenges
- **Engagement Landscapes** – geographic locations where we carry out concentrated, long-term transformative work with diverse and committed partners
- **Flagship Products** – initiatives that provide action-oriented insights into key global issues

Find specific examples of these innovations throughout this report.

Our network

The entities of the CIFOR-ICRAF network reinforce and advance our shared aim to unlock the potential of trees and forests to combat climate change, biodiversity loss and land degradation. See pages 16-19 for details.
Thriving, diverse forests and farms

Our work on tree genetic resources, sustainable forest management, and soil and land health is supporting efforts to halt deforestation and revive degraded lands and habitats.

Beyond tree planting: Landscape restoration that sticks

Amid the onslaught of bad news about accelerating climate change and collapsing ecosystems, landscape restoration offers hope and a path forward. But how to ensure that restored areas stay restored? What drives 'permanence' is a critical research topic for the global restoration agenda, especially as efforts are bolstered by the UN Decade on Ecosystem Restoration (2021–2030) and the Glasgow Leaders’ Declaration to halt and reverse forest degradation by 2030.

CIFOR-ICRAF has deep roots of engagement in Ethiopia, which is known for its commitment to restoration. In partnership with the United States Agency for International Development (USAID), researchers applied the Stakeholder Approach to Risk Informed and Evidence-based Decision-making (SHARED) in the Oromia Engagement Landscape to identify factors that determine the permanence of a restored forest or agricultural ecosystem and whether this triggers habitat degradation elsewhere – i.e., 'leakage'. Researchers used crowdsourced data from the Regreening Africa App, conducted household surveys and held stakeholder workshops.

Findings showed that households practising permanent land restoration had at least one ‘most-demanded’ tree species near their farms or homesteads along with other diverse tree species. They tended to be wealthier, have larger land plots with livestock and were more aware of natural resource use bylaws and regulations. Households living further away from urban centres were more likely to contribute to leakage compared to those near cities. The main conclusion? Assessing permanence should be incorporated into restoration planning early on.

CIFOR-ICRAF’s Landscape Restoration Transformative Partnership Platform (TPP), which aims to enhance the understanding of what works and what does not in particular socioecological landscapes. The TPP is co-generating and sharing locally relevant lessons through global comparative research on the various dimensions of land restoration.

“This project demonstrated the importance of linking socioeconomic and biophysical drivers of degradation in order to design long-term land restoration options that reduce leakage and increase permanence.”

Leigh Ann Winowiecki
Team Leader, Soil and land health

Learn more
www.cifor-icraf.org/landscape-restoration

Read
Building evidence on permanence and leakage for sustainable restoration outcomes

Supported by United States Agency for International Development (USAID)
Closing Peru’s national restoration gap

Peru’s new national restoration strategy (ProREST) has at its heart a commitment to the landscape approach. This is thanks in part to long-term research and engagement by CIFOR-ICRAF, which Peru’s National Forest and Wild Fauna Service (SERFOR) recognized as a key provider of evidence-based recommendations to guide the strategy. SERFOR foresees ongoing collaboration with CIFOR-ICRAF on research and restoration technologies, technical support and documentation.

Yangambi: A proven model of engagement

The Yangambi Engagement Landscape in the Democratic Republic of the Congo is an example of what you can achieve when you spend enough time in one place, getting to the crux of the issues affecting people and their environment. In fact, CIFOR-ICRAF’s ‘engagement landscapes’ concept was sparked by the impacts achieved through nearly 15 years of work with institutions and communities near the Kisangani-Yangambi urban–rural complex, co-creating solutions to forest degradation and poverty.

Over 2 million trees have been planted since 2019, restoring over 2,300 hectares of land and creating over 3,400 seasonal and direct jobs. In a few years, the trees will be ready for use as biomass in a combined heat and power plant, now under construction.

More than 220 masters and doctoral researchers have been trained through a 15-year collaboration with the University of Kisangani (UNIKIS) and 11% of these are women. Infrastructure upgrades to UNIKIS include about 5,500 square metres of state-of-the-art low-carbon buildings.

Sustainable livelihood efforts are focusing on development of small-to-medium enterprises (supporting 1,017 people, of whom 706 are women), sustainable charcoal (with 106 charcoal makers trained and 19 community nurseries established), fish farming (with over 5 tons already produced in cooperative fish farms), and agroforestry using fruit trees mixed with improved cassava, corn and peanut crops. Performance-based schemes are boosting entrepreneurship for women and men.

To curb the devastating impact of urban wildmeat consumption on forest biodiversity, an innovative campaign uses comic-strip-style posters and community theatre to change people’s perception around selling and consuming wildmeat.

Finally, environmental education and outreach activities include a photo exhibit depicting the region’s history, music videos, over 3,250 primary- and secondary-school students participating in periodic workshops, and an animated film.

Supported by European Union, Belgium, USAID
Climate-resilient ecosystems and communities

We provide critical evidence on nature-based solutions to the climate crisis, such as sustainable forest and wetland management, agroforestry and landscape restoration.

Knowledge for action on tropical forests and rights

The Global Comparative Study on REDD+ (GCS REDD+) launched its fourth phase in 2021, building on over a decade of research on actions to reduce emissions from deforestation and forest degradation, and enhance forest carbon stocks.

In Viet Nam, the Ministry of Agriculture and Rural Development (MARD) referenced GCS REDD+ global research findings on carbon rights and REDD+ benefit-sharing in a draft decree that, once approved, will be a criterion for receipt of results-based payments.

In Peru, the Ministry of Environment submitted its updated national Forest Reference Emissions Level (FREL) to the United Nations Framework Convention on Climate Change. Informed by GCS REDD+ research on soil carbon emissions from deforestation and forest degradation, the FREL is the first official national document to recognize the importance of Amazonian peatlands. And the National Service of Protected Areas (SERNANP) officially adopted the customized adaptive learning tool ¿Cómo vamos? on multistakeholder management committees.

In Indonesia, several GCS REDD+ contributions were adopted in the country's second FREL, including the addition of methane and nitrous oxide emissions from peatland degradation, a new approach for calculating emissions from mangrove conversion apart from other land uses, and the inclusion of emissions from peat fires.

Finally, CIFOR-ICRAF was invited to contribute to global initiatives such as the World Bank's multi-donor trust fund Enhancing Access to Benefits while Lowering Emissions (EnABLE), the LEAF Coalition's Emergent Working Group, and the International Land Coalition (ILC). Requests also came from the private sector for scientific input, as well as from countries such as Guatemala and Viet Nam to support the development of national REDD+ benefit-sharing plans.

“Our science-policy dialogues in Indonesia, Peru and DRC are bringing new insights into what is needed for countries to meet their post-CoP26 climate commitments.”

Pham Thu Thuy
Team Leader
Climate change, energy & low-carbon development

Supported by cifor.org/gcs/partners

Read
Special collection: GCS REDD+ Stories of change

Watch
Fair and equitable REDD+ finance and benefit-sharing mechanisms for climate goals and justice
Successful restoration considers gender and social inclusion.

Yanonge, DRC
© Axel Fassio/CIFOR-ICRAF

How to fix the tree-planting value chain

Among nature-based solutions to the climate crisis, tree planting is hailed as king. Done right, it can both mitigate climate change and boost resilience to its effects, while also addressing the other global challenges. Done wrong, it can harm ecosystems or simply fail, discouraging further investments.

The tree-planting value chain is broken. In the rush to put seedlings in the ground, tree seed is often bought from undocumented sources to supply project-funded nurseries, which then distribute tree seedlings to growers at no charge.

“This undermines existing networks of small-scale commercial seed dealers and private tree nurseries that could guarantee a more sustainable supply of better quality germplasm,” says Ramni Jamnadass, who co-leads the Transformative Partnership Platform (TPP) on the Quality of Tree Planting with Lars Graudal.

Building on over 30 years of experience in the science and practice of tree planting, the TPP responds to the need to support quality-focused engagement between tree planters and investors.

A 2021 policy analysis put the value of fixing this value chain in sharp focus, using the example of the African Forest Landscape Restoration initiative (AFR100), which aims to restore 100 million ha of degraded land by 2030.

“We estimate that investing a mere 5% more in tree seed supply ... would sequester a further 19 million tonnes of carbon, reduce annual soil erosion by a further 4 million tonnes, and generate at least 80,000 more jobs in the harvesting, processing and marketing of new tree products,” says Lars Graudal.

A worthy investment indeed.

Supported by FTA, Norwegian International Climate and Forest Initiative (NICFI)

GLF Climate 2021: Forests, Food, Finance – Frontiers of Change

Featuring 400 leading scientists, activists, Indigenous leaders, financiers, youth and policymakers, the GLF Climate hybrid conference provided a critical opportunity for thinkers and actors to connect both virtually and in-person, alongside the UN climate conference in Glasgow. The goal? To lay down landscape-based pathways for meeting climate commitments that focus on creating positive tipping points for forests, food and climate.

42 million reached on social media
1 million session views from 140 countries
4,500 digital participants from 145 countries
481 in-person participants

Tools for better trees

CIFOR-ICRAF has made a vast array of resources freely available through the Global Tree Knowledge Platform. These include the vegetationmap4Africa, the Useful Tree Species for Eastern Africa selection tool, a climate change atlas for Central America and other databases, maps and apps, guidelines and analyses.
Sustainable, vibrant food systems

We are showing how trees and forests can transform the way we produce and consume nutritious foods, whether cultivated or wild.

How agroecology is transforming food systems globally

On a farm, as in a forest, biodiversity means resilience.

This is particularly true for farmers across the tropics who are on the front line of the interconnected climate, food and land degradation crises. And while agroecological approaches such as intercropping, mulching, agroforestry and integrated crop-livestock systems can boost both productivity and resilience, sceptics challenge whether it can be taken to scale.

The Transformative Partnership Platform (TPP) on Agroecology is responding to a clear demand for evidence on how well agroecological approaches perform in terms of food security, income and return on labour. Formed in 2020 in response to the 2019 Committee on World Food Security High Level Panel of Experts report, and launched in 2021, the TPP addresses knowledge and implementation gaps constraining agroecological transitions.

Transitions vary according to context. In India, the focus is on reducing dependence on environmentally disruptive and often toxic agrochemicals that have driven many farmers into debt. The TPP has contributed to research that has shown how agroecological transitions can be made in Andhra Pradesh without reducing crop yield.

In Sub-Saharan Africa, where many farmers use few inputs, the focus is on agroecological intensification – how to increase productivity equitably, without damaging the environment, including the soil and pollinators on which agricultural production depends.

Hosted on GLFx, the TPP’s thriving, inclusive and diverse community of practice continues to grow and evolve.

CIFOR-ICRAF Chief Scientist Fergus Sinclair credits the rise of agroecology on the global agenda in part to the TPP. “Going into the UN Food Systems Summit, agroecology was not even on the agenda. Yet one of the summit’s most significant outcomes was the emergence of a coalition to transform food systems through agroecology,” he said.

Supported by France, SDC (Switzerland), EU-INTPA (European Union), BMZ (Germany), One CGIAR

“This TPP was at the forefront of phenomenal progress in getting agroecological approaches mainstreamed during 2021.”

Fergus Sinclair
Chief Scientist, CIFOR-ICRAF
An agroforestry app for Odisha

Farmers, extensionists and decision makers in Odisha, India can now use their smart phone to access best practices for agroforestry systems (both trees and crops), including where to find quality planting material. Co-developed by CIFOR-ICRAF’s India country team, its Spatial Data Science and Applied Learning Lab (SPACIAL), the Central Agroforestry Research Institute of ICAR, and the Agriculture Department of the State Government of Odisha, the app is the product of an agroforestry project designed to boost the production and consumption of nutritious foods in the state.

Supported by Government of Odisha, State departments for agriculture, horticulture, livelihoods and bamboo, ICAR-Central Agroforestry Research Institute, and ICAR-National Rice Research Institute

A landscape perspective on nutrition and livelihoods

Trees play an important role in the nutrition and food security of people worldwide. Whether in forests or on farms, trees benefit communities both directly through the foods they grow, and indirectly through the ecosystem services they provide for farming, and the incomes they generate through the sale of wood and non-timber forest products.

The TPP works across geographies and projects to highlight trade-offs and synergies within the food system. For example, in Indonesia, the TPP is working to understand how conversion to oil palm in smallholder landscapes and conversion of mangroves in coastal landscapes affects diets and incomes.

With its Zambian partners, the TPP carried out the first nationally representative estimate of wild food contributions to diets in the world.

Together with local communities across Africa, Nutri-scapes researchers are co-developing context-specific ‘nutritious food portfolios’. These are designed to fill seasonal micronutrient gaps in local diets through a combination of indigenous and exotic tree foods, alongside other vegetable, legume and staple crops.

Supported by German Federal Ministry for Economic Cooperation and Development (BMZ)
Green, equitable supply and value chains

By showing how trade and investment in forest and tree products can benefit rural livelihoods, we help translate sustainable production into income.

A powerful tool for sustainable oil palm

Gather a group of strangers around a table for a board game, and you have a great ice-breaker. But when that game is based on science and the players include smallholders, villagers, local government and private companies, it can be a tool for transformation.

The six-year Oil Palm Adaptive Landscape (OPAL) project aimed to improve the management of oil palm landscapes in Cameroon, Colombia and Indonesia – which together account for 59.4% of global palm oil production – by opening up lines of communication between industry stakeholders.

In each country, researchers and stakeholders developed a board game tailored to address context-specific issues such as supply chain problems. Role playing drew not only laughs but also insights, as each player took on a role that was polar opposite to real life.

“The head of a plantation or a local government official typically plays a smallholder farmer struggling to get a legal permit or a fair price for fresh fruit bunches,” said Heru Komarudin, a CIFOR-ICRAF researcher and policy analyst whose portfolio includes OPAL. “This shift in perspective and the friendly atmosphere allowed people to speak freely even when discussing sensitive issues.”

As a result, small-scale producers and agro-businesses became more aware of each other’s needs, and government officials gained a better sense of the nuances on the ground.

While the impacts of such exercises are difficult to quantify, there are signs of progress. In Cameroon, discussions around a national strategy for sustainable palm oil resumed after several years on hold.

In Indonesia, CIFOR-ICRAF collaborator Arya Hadi Dharmawan coordinated a group of IPB University scholars who became involved in key national processes to contribute to the development of policies on smallholder–private sector partnerships and the Indonesian Sustainability Palm Oil certification system.

And in Colombia, John Garcia of ETH Zurich said, “multiple stakeholders became aware of the considerable scope for expanding oil palm in a sustainable way, minimizing adverse impacts on carbon, water consumption, local climate and biodiversity.”

Supported by Swiss Agency for Development and Cooperation (SDC), Swiss National Science Foundation (SNSF), Swiss Programme for Research on Global Issues for Development and the Luc Hoffman Institute.

“This shift in perspective and the friendly atmosphere allowed people to speak freely even when discussing sensitive issues.”

Heru Komarudin
CIFOR-ICRAF Researcher and Policy Analyst
Agroforestry takes root in Viet Nam

Ten years ago, farmers in northwest Viet Nam began planting trees – mango, longan, plum, lemon and macadamia nut – among crops of maize and fodder grass on their crumbling mountain slopes. The result? Visibly richer, more stable soil and a lot more products to sell at market.

Achieving this took extensive collaboration among farmers, researchers and local authorities during two consecutive ACIAR-funded projects in the region, where unsustainable farming practices like maize monocropping had kept generations of people in a cycle of land degradation and poverty.

“Hundreds of individuals contributed to the success of the project, and this cooperation was recognized in an independent assessment,” said CIFOR-ICRAF scientist Nguyen Quang Tan.

The first project explored agroforestry options for smallholder farmers from 2011 to 2016, followed by research on developing and promoting market-based agroforestry and forest rehabilitation, in partnership with Southern Cross University and the Vietnamese Academy of Forest Sciences. With a view to long-term restoration success, the project worked with farmers to establish local tree nurseries, thereby ensuring a sustainable supply of seedlings.

Over the course of the decade, CIFOR-ICRAF developed seven market-oriented agroforestry systems that enabled farmers to diversify their products, boost income and slow erosion. Participating households, many of which were from ethnic minorities, noted that the agroforestry system was less labour-intensive, leaving them more time for family and other activities.

Established by CIFOR-ICRAF, the Agroforestry Network for the Northwest will pick up where the project left off. It aims to promote and expand the use of agroforestry as a means to restore degraded landscapes, mitigate and adapt to climate change, and enhance livelihoods and market access for local people – especially ethnic minority women.

Supported by Australian Centre for International Agricultural Research (ACIAR), FTA

Learn more
Developing and Promoting Market-based Agroforestry and Forest Rehabilitation Options for Northwest Vietnam – AFLI-II

Read
Gender and ethnicity in Vietnam agroforestry landscapes: Lessons for Project Implementation
Adoption of agroforestry in Northwest Viet Nam: What roles do social and cultural norms play?
Inclusive, rights-based collaboration and governance

Throughout our work, we address inequalities and support practices of governance that lead to positive change for women, Indigenous Peoples and rural communities.

Tools for gender equity and social inclusion

In 2021, CIFOR-ICRAF gender specialists synthesized years of research findings into an array of knowledge products and shared their insights with both local and global communities.

Roadmaps to gender and social inclusion is a digital toolbox developed in partnership with CGIAR Research Programs on Forests, Trees and Agroforestry (FTA) and on Policies, Institutions and Markets (PIM). This rich online portal links to various resources designed to support gender-responsive and gender-transformative activities, including a course to build a core group of women and men tenure champions, a book on adaptive collaborative management in forest landscapes, report on masculinities in forests, a brief summarizing FTA’s decade-long journey to advance gender equality in forest and tree landscapes, and links to strategy documents and key knowledge hubs.

Our work with FTA led to the online course Gender and inclusion in Forest Landscape Restoration as well as an infographic and brief to support the finalization of the Convention on Biological Diversity’s Gender Plan of Action in the lead up to COP 15.

Getting it right is a how-to guide for multistakeholder forum organizers to facilitate inclusion of women and Indigenous Peoples, developed in partnership with PIM. Our work in this area led to a new collaboration with the World Bank to design a strategy for gender and social inclusion in results-based carbon finance.

Our online presence was as robust as ever, with lively podcasts and online events. Over 400 people joined a session at GLF Amazonia featuring research on gender-inclusive initiatives supported by the World Bank-led Amazon Sustainable Landscapes Program in Brazil, Colombia and Peru.

Finally, the Global Initiative for Gender Transformative Approaches is a new three-year project that aims to promote and strengthens women’s land rights in the International Fund for Agricultural Development’s rural development interventions.

“The year 2021 provided an opportunity to consolidate and reflect on many years of work on gender, and demonstrates our team’s enormous growth from studying gender to supporting transformation.”

Anne Larson
Team Leader, Governance, equity and well-being
The struggle over shea

For over 200 years, women have managed the shea value chain, producing cooking oil and skin care products from the kernels of the shea tree (Vitellaria paradoxa) for both home use and local and regional trade. It is the most widely occurring tree species in West Africa’s parklands, and Burkina Faso is a major exporter of shea kernels and shea butter.

But over the past 20 years the market has shifted to meet growing demand from BRICS countries (Brazil, Russia, India, China, and South Africa) for Cocoa Butter Equivalents (CBEs) used primarily in the chocolate and confectionary industries.

This trend, along with climate change and agricultural encroachment, is threatening the shea parklands and the ecosystem services they provide. Yet only 2 percent of the national target to restore 5 million hectares of land by 2030 has been reached.

The IDRC-FTA-financed ‘Globalizations in a nutshell’ project sought to untangle the complex dynamics and gendered nature of the shea value chain, with the aim of improving the governance of shea parklands to lessen the impacts of economic and climate shocks on women producers.

A historical analysis of the shea trade since the late 19th century highlighted how various policies, the rise of local producer groups and access to new markets promoted shea processing and marketing while the degradation of parklands continued.

CIFOR-ICRAF co-hosted a National Shea Forum with the government of Burkina Faso in Ouagadougou in June 2021. The event drew more than 175 participants and culminated in a 10-point call to action that includes support for the development of a national parkland restoration program, shea tree domestication and genetic development, and the introduction of certification schemes. This outcome supports the development of a sustainable and equitable shea value chain in accordance with Burkina Faso’s National Climate Change Adaptation Plan.

Supported by International Development Research Centre (IDRC), FTA.

Fostering joint forest and water governance

The Mau Forest Complex is East Africa’s largest ‘water tower’, supplying critical freshwater and other resources to six million people downstream. From 2012 to 2021, the BMZ-funded Water Towers of East Africa project engaged with communities through action research and brought together community forest associations and water resource user associations through research and capacity development activities to identify equitable and collaborative joint governance arrangements.

cifor.org/water-towers
Forests, Trees and Agroforestry

A decade of collaborative research and action

The CGIAR Research Program (CRP) on Forests Trees and Agroforestry (FTA) is celebrating 10 years of impactful research for development. Between 2011 and 2021, led by CIFOR-ICRAF and its strategic partners – the Alliance of Bioversity International and CIAT, CATIE, CIAT, INBAR and Tropenbos International – FTA upheld trees and forests as drivers of transformational change.

Last December, FTA held a ‘final’ event to wrap-up the CRP, bringing together scientists and policymakers. This was an occasion to present the FTA Highlights of a Decade series, an 18-volume collection that showcases the partnership’s most powerful contributions to key development targets. FTA also published the Integrative Impact Studies, a set of programme-wide impact assessment studies that document the ways FTA has contributed to protecting forests, restoring degraded lands, reducing unsustainable land-use practices, eliminating rural poverty and supporting nutritious diets.

These studies demonstrate that FTA’s contributions have resulted in: enhanced protection for 26–133 million ha of forests, representing 24–125 Gt of avoided CO₂ emissions; between 2–35 million ha of land brought under restoration; better management for 60–204 million ha of land; additional means to exit poverty and reduce vulnerability for 5.1–19.0 million people; and additional means to improve food security and nutrition for 1.1–3.5 million people.

It was a year oriented towards influencing the major global conferences on biodiversity (CBD Kunming 2022, UNFCCC Glasgow and UN Food Systems Summit-UNFSS).

Towards UNFSS, FTA contributed to the public consultations for the five UN Action Tracks and proposed 11 game-changing solutions for sustainable food system transformations, some of which were retained in the final set of recommendations of the Summit. As founder of the Transformative Partnership Platform (TPP) on Agroecology, FTA organized the official launch of the TPP during a side event of the 48th Committee on Food Security (CFS48). The Agroecology TPP brings together scientists and practitioners to devise alternatives to intensive industrial agriculture and contributed to the emergence of the coalition for agroecology out of the UNFSS. Following its launch, FTA facilitated the TPP’s global presence through several events:

10 years of impact

- 78 countries with FTA projects
- $818 million in funding
- >450 partnerships over 10 years
- >6k research publications
- >80k times cited
- >5.5 million downloads

On the ground

- Up to 133 million ha of forests protected
- 24–125 Gt of avoided CO₂ emissions
- Reduced vulnerability/poverty for 5–19 million people
Policies for Agroecology (July), the Million Voices Initiative (September, at the UNFSS), Research on Agroecology (October) and at GLF Glasgow.

Towards CBD, FTA organized, in partnership with CAF and the Kunming Botanical Institute, the hybrid Kunming Biodiversity Conference, leading to 12 key policy recommendations that support biodiversity for use by stakeholders to the CBD.

During UNFCCC COP26 in November, FTA hosted several talks at the GLF Climate: Frontiers of Change hybrid conference. It launched its FTA Highlights series and the first co-publication with FAO on Asia-Pacific Roadmap: Forestry innovations from youth in the Asia-Pacific Region.

In 2021, the programme held a wrap-up seminar on its Covid-19 rapid research response, launched in 2020, with the final results of several key studies. FTA also led a working group of the CGIAR Covid-19 Hub – Working Group 4, which contributed to the first world-level assessment on the impacts of COVID-19 on food security, and to a set of studies on building food system resilience.

The results were presented at the Building forward better: Pathways to resilience webinar in December.

FTA also launched two innovative communications campaigns – the Google Arts and Culture partnership and From Tree to Fork – to raise awareness about the vital role trees play in food security and human development. These stunning digital displays communicated to a mass audience the real day-to-day benefits from trees and forests.

This year’s achievements were only possible thanks to the decade of work from all FTA partners. Together, they helped FTA achieve the highest collaboration index (6.48) of any CRP. Grounded in scientific evidence, the partnership published over 6,000 research papers, which were cited around 79,500 times and downloaded over 5,550,000 times. A complete database is available at foreststreesagroforestry.org/publications, 73% of which is open-access. An independent review conducted in 2020 outlined FTA’s high scientific productivity, ranking FTA first out of all CRPs for collaboration and among the first three for policy innovations and progress toward planned outcomes.

As 10 years of co-constructed research, discovery, innovation and advocacy wrapped up (as a CGIAR Research Program), the evidence shows that forests, trees and their environments play a critical role in achieving the aims of Agenda 2030 and beyond. With the momentum of a decade behind it, FTA has begun re-imagining itself and is looking forward to the launch of a new research-for-development partnership for forests, trees and agroforestry in 2022.

CIFOR-ICRAF has worked closely with other CGIAR Research Programs (CRPs), which also concluded in December 2021 as the One CGIAR initiative was launched.

Our long-term engagement with the CRP on Policies, Institutions and Markets (PIM) produced a wealth of scientific publications and knowledge products over the year, including a brief series and webinar on governance of natural resources, an interactive map on community forest management in the Peruvian Amazon and a capacity-building workshop in forestry development for Indonesian government officers. Work on multistakeholder forums included a 7-part series in a special issue of the International Forestry Review with an associated news series, and a webinar titled ‘Puzzle pieces or poker chips?’ hosted by CIFOR-ICRAF Principal Scientist Anne Larson. See also the story on gender highlights for PIM-related outputs.

CIFOR-ICRAF also worked with the CRPs on Climate Change, Agriculture and Food Security (CCAFS) and on Water, Land and Ecosystems (WLE).
Global Landscapes Forum

By the end of 2021, the GLF had reached 1.5 billion people, establishing it as the leading global movement on sustainable landscapes. The GLF’s connection with communities, grassroots actors and local change-makers, as well as large, multilateral donors puts it in a unique position to catalyse transformative change at scale.

In 2021, the GLF continued to seek solutions and rally action to solve the most urgent challenges of our time. It ran three major hybrid or full digital events, GLF Africa, GLF Amazonia and GLF Climate, with 900 speakers and 18,000 participants from 186 countries. 2021 also saw the launch of the UN Decade on Ecosystem Restoration with the GLF as its core partner.

GLF Flagship Programs

Sustainable Investment and Value Chains – shifting financial flows towards sustainable land-use models through the only global forum focused on nature-based investment, GLF Investment Case, and contributing to FOLUR – Food Systems, Land Use and Restoration Impact Program.

Knowledge & Learning – providing free, online learning opportunities. Twenty thousand people have completed Landscape Academy courses, which were developed by world class institutions and led by experts.

Pioneering Youth Leadership – growing global movement of 80,000 young people in 160 countries. The second edition of the Restoration Stewards program funds and highlights the work of six youth-led restoration projects in Africa, Latin America and Asia.

Digital Knowledge Commons – building a digital community that co-produces knowledge, information, content and experience across geographies, positions and perspectives on digital platforms.

Community-led GLFx Chapters – fostering community-led action on the ground through independently organized local chapters worldwide.

GLF has connected

8k organizations
60k youth
90 governments
275k event participants from 185 countries
33 leading global development institutions serving as Charter Members

GLF has reached

1.5Bn people
647M reached through media outreach in 2021
181M on social media
Resilient Landscapes

Incubated by CIFOR-ICRAF with a mission to catalyse investments in nature-based solutions from the private sector and financial institutions, Resilient Landscapes delivers results-driven action across all 17 Sustainable Development Goals.

2021 project snapshots

Land restoration and bioenergy production in Serbia

A landscape transformation program in Vojvodina aims to restore the links between the demand for woody biomass and existing resources and local economic networks in the agricultural landscape, while simultaneously regenerating vital landscape functions. During COP26 in Glasgow, a special event was organized by CIFOR-ICRAF, Resilient Landscapes and E3 International, to showcase the Serbia project focusing on the growth of energy crops. After a successful first trial period, the objective is to expand the initiative further.

Oil palm agroforestry to restore soils and biodiversity in Brazil

The project will scale up an innovative way of producing palm oil – in association with other tree crops like cocoa, açai, timber trees and non-timber like pepper – based on a CIFOR-ICRAF agroforestry experiment implemented over more than 10 years across 60 hectares. Resilient Landscapes is working with CIFOR-ICRAF Brazil from project design to fundraising in order to build a phased growth of the project, its stakeholders and its processes.

Forestry in Papua New Guinea

Endorsed by the Governor of the Oro Province, Gary Juffa, and the Prime Minister of Papua New Guinea, the Honourable James Marape, the project is designed together with the Papua New Guinea government, local partners and local communities. The project aims to empower the 150 clans and 22,000 households living in the Managalas protected forest to leverage carbon financing at premium offset prices, develop sustainable supply chains that maintain the forest’s natural capital and support local communities through sustainable timber production, tree-crop commodities, diversified agricultural systems, enhanced value chains and value webs, and ecosystem services. A high-level meeting was organized at the UN climate conference to present a business case for the Managalas as an ideal case for forest habitat protection, provision of ecosystems services and sustainable and remunerative community stewardship of forests.
## Communications, outreach and engagement

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total website pageviews</td>
<td>3.6M</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>11%</td>
</tr>
<tr>
<td>Blog site pageviews</td>
<td>1.2M</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>2.3%</td>
</tr>
<tr>
<td>Publication downloads</td>
<td>2.5M</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>39.2%</td>
</tr>
<tr>
<td>E-newsletter subscribers</td>
<td>85k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>18.2%</td>
</tr>
<tr>
<td>Total followers in social media</td>
<td>124M</td>
</tr>
<tr>
<td><strong>Impressions</strong></td>
<td></td>
</tr>
<tr>
<td>Engagements on Facebook</td>
<td>586k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>31%</td>
</tr>
<tr>
<td>Followers on Instagram</td>
<td>15k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>24%</td>
</tr>
<tr>
<td>Citations</td>
<td>50k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>12%</td>
</tr>
<tr>
<td>Engagements on Twitter</td>
<td>381k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>18%</td>
</tr>
<tr>
<td>Engagement on LinkedIn</td>
<td>571k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td></td>
</tr>
<tr>
<td>Media articles</td>
<td>3k</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>33%</td>
</tr>
<tr>
<td>YouTube views</td>
<td>2.6M</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td></td>
</tr>
<tr>
<td>Total followers in social media</td>
<td>118,600</td>
</tr>
<tr>
<td><strong>Increase</strong></td>
<td>28%</td>
</tr>
</tbody>
</table>
CIFOR-ICRAF expenditures 2021

- Personnel: 31%
- Supplies and services: 40%
- Travel: 3%
- Collaboration: 1%
- Depreciation: 24%

Total expenditure in 2021: $85.7M

Source: CIFOR and ICRAF Audited Financial Reports 2021
Partners

Our work is possible thanks to the financial support of our Funding Partners and the collaboration of our Strategic Partners. We work closely with a range of local and international organizations and institutions to deliver research projects with the greatest potential impact. For more information about our partners please visit: cifor-icraf.org/partners

Funding partners

- ADM Capital Foundation Ltd.
- African Development Bank
- Agence Française de Développement (AFD)
- Agropolis Foundation
- Amazon.com, Inc.
- Arcadia Fund
- Association de Coopération et de Solidarité en RDC
- Association for Computing Machinery
- Association of Southeast Asian Nations (ASEAN) – Secretariat
- Austrian Centre for International Agricultural Research (ACIAR)
- Austrian Development Agency (ADA)
- Aziz Premji Philanthropic Initiatives Private Ltd. (APPI)
- Bangor University
- Biotechnology and Biological Sciences Research Council
- Bioverso International
- Biketion Foundation
- Bill & Melinda Gates Foundation
- BNP Paribas
- Botanic Gardens Conservation International (BGCI)
- Federal Ministry for Economic Cooperation and Development (BMZ) – Germany
- Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) – Germany
- Carnegie Corporation of New York
- CEMOI
- Central and West African Virus Epidemiology Program
- Centre DIAPulp Aux Femmes Et Aux Rarux
- French Agricultural Research Centre for International Development (CIRAD)
- Ministry of Agriculture, Chad
- Children’s Investment Fund Foundation
- Chinese Academy of Agricultural Sciences
- ClimateWorks Foundation
- Conservation International
- CGIAR Fund
- Convention on the Conservation of Migratory Species of Wild Animals
- German Academic Exchange Services (DAAD)
- David and Lucile Packard Foundation
- Department for Business, Energy & Industrial Strategy (BEIS)
- Department of the Environment and Energy – Australia
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- ECOM Agroindustrial Corporation
- Enaviel-Belgian Development Agency
- Environmental Defense Fund (EDF)
- Economic and Social Research Council (ESRC)
- Ethiopian Environment, Forest and Climate Change Commission (ESFCCC)
- European Commission
- European Forest Institute
- Evangelische Werk für Diakonie und Entwicklung e.V.
- Forum for Agricultural Research in Africa (FARA)
- Federal Research and Training Centre for Forests, Natural Hazards and Landscape, Austria
- Interprofessional Fund for Agricultural Research and Council (IRCA)
- French Research for Global Environment (FFEM)
- Ford Foundation, USA
- Foreign, Commonwealth & Development Office (FCDO) – United Kingdom
- General Director of Forest, Coffee and Industrial Plants (GDCFIP) – Timor Leste
- Global Affairs Canada
- Global Environment Facility (GEF)
- Global Evergreen Alliance
- Global Giving
- Global Green Growth Institute
- Government of India
- Government of Ireland
- Government of Japan
- Government of Kenya
- Government of Odisha, India
- Government of China
- Government of Tanzania
- Government of the Republic of South Africa
- Government of Zambia
- Governors of Saint Francis Xavier University
- Green Climate Fund (GCF)
- Helvetas Swiss Intercooperation
- Hochschule für nachhaltige Entwicklung Eberswalde (HNEE)
- International Crop Research Institute for the Semi Arid Tropics
- IDH Sustainable Trade Initiative
- International Institute of Tropical Agriculture
- KEA Trading (HKG)
- Indian Kale Pulp and Paper Corporation, PT
- International Center for Tropical Agriculture (CIAT)
- International Centre for Environmental Management
- International Development Research Centre (IDRC)
- International Land Coalition (ILC)
- International Livestock Research Institute (ILRI)
- International Potato Center (CIP)
- International Rice Research Institute (IRRI)
- International Union for Conservation of Nature (IUCN)
- International Water Management Institute (IWMI)
- Johannes Kepler University Linz
- Koninklijke Douwe Egberts B.V.
- Lancaster University
- Land Equity International Pty Ltd. (LEI)
- Livelihoods Fund
- London School of Hygiene & Tropical Medicine
- MAB-Folkehelse Nettet
- Mars, Inc.
- McCormick Global Ingredients Ltd.
- Ministère de l’Environnement, du Climat et du Développement durable
- Ministry of Agriculture, Forestry and Fisheries of Japan
- Ministry of Agriculture, Livestock, Fisheries, and Cooperatives, State Department for Livestock – Kenya
- Ministry of Agriculture – Republic of Malawi
- Ministry of Environment, Climate Change and Natural Resources, Gambia
- Ministry of Foreign Affairs – Japan
- Ministry of Foreign Affairs – Norway
- Musée Royal d’Afrique Centrale (MRAC)
- Nachhaltig Hydro Power Company (NHPC)
- National Academy of Sciences (NAS)
- National Centre of Agricultural Botany
- National Institute of Forest Science (NFoS) – Republic of Korea
- New Venture Fund
- Northern Rangelands Company Ltd.
- Norwegian Agency for Development Cooperation (Norad)
- Norwegian Church Aid
- Norwegian Institute of Bioeconomy Research
- Norwegian University for Life Sciences
- Öko-Institut e.V.
- One Tree Planted
- Pontificia Universidad Católica del Perú (PUCP)
- Region Grisons
- Robert Bosch Stiftung
- Rockefeller Foundation
- S&D Nedcoffee, De Sijlve Verkade
- Societe Africaine de Cacao (SACO)
- Save the Children International
- Singapore Cooperation Enterprise
- International Soil Reference and Information Centre
- Rabo Foundation
- Stockholm International Water Institute (SIWI)
- Swiss National Science Foundation
- Temasek Foundation International (TFF)
- Temo Environnement Aminagement, TEREA-France
- Th Köln (University of Applied Sciences)
- The Center for People and Forests (RIGOFTC)
- The Nature Conservancy
- TMG Research gGmbH
- Traicare-Rwanda
- UK Research and Innovation (UKRI)
- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- United Nations Office for Project Services (UNOPS)
- United States Agency for International Development (USAID)
- United States Fish and Wildlife Service (USFWS)
- University of Birmingham
- University of California, Davis
- University of Cambridge
- University of Edinburgh
- University of Ghana
- University of Giesen
- University of Rhodes Island
- University of Sheffield
- Amherst Foundation
- World Bank
- World Conservation-Monitoring Centre
- World Wildlife Fund (WWF)
- Yale University

Strategic partners

- ABT Associates Inc.
- ACDI/VOCA
- Action Against Hunger
- Action for the promotion de la création (APORE)
- Actions for the Promotion et Protection des Peuples et Espèces Menacés (APelem)
- ADE Sa
- Adventist Development and Relief Agency (ADRA) – KENYA
- Agence belge de développement
- Amari Nature Reserve
- ANARE
- ARCOA (SIT Srl)
- Ashoka Trust for Research in Ecology and the Environment
- Asia Pulp and Paper (APP)
- Asian Forest Cooperation Organization (AfroCo)
- Asia-Pacific Network for Sustainable Forest Management and Rehabilitation
- Association de Coopération et de Solidarité en RDC
- Association des Fabricants des Brosses (ABF)
- Badan Utihan dan Inovasi (BUI) – KLHK
- Badan Penelitian dan Pengembangan Daerah Tropika dan Hutan Tropis (BP2HUTRO)
- Bankers Institute of Rural Development
- Better Globe Foresty Ltd.
- Borlaxa Foundation for South Asia
- Boyoma
- Bukalasa Agricultural College
- Calman House Inc.
- CarbonEthics Foundation
- Cardio Emerging Markets USA, Ltd.
- CARE Nederland
- Catholic Relief Services USCCB Inc.
- Center for Research and Sustainable Community Development
- Center for Transformative Action (CTA)
- Central & West African Virus Epidemiology (CAVE)
- Central African Forest Commission (COMAFRAC)
- Central Agroforestry Research Institute, India
- Centre for Biosecurity Studies, The University of the West Indies (CIES, UWI)
- Centre for International Co-operation in Sustainable Management of Tropical Peatland
- Centre for International Sustainable Development Law (CISDL)
- Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)
- Centro de Inteligencia Territorial
- Chinese Academy of Forestry
- Clean Power Indonesia (CPI)
CIFOR-ICRAF envisions a world in which people enjoy livelihoods supported by healthy, productive landscapes made resilient through the transformative power of forests, trees and agroforestry.

Global crises are amplifying each other in catastrophic ways, fuelled by deforestation and biodiversity loss, climate change, dysfunctional food systems, unsustainable supply and value chains, and inequality affecting women, Indigenous Peoples and other marginalized groups.

But trees – whether in forests or on farms – are a key part of the solution.

CIFOR-ICRAF delivers demand-driven evidence of the ways trees can revitalize both landscapes and livelihoods. Born of the merger of the most trusted research organizations on forests, trees and agroforestry – the Center for International Forestry Research (CIFOR) and World Agroforestry (ICRAF) – CIFOR-ICRAF harnesses a combined 70 years of expertise and extensive partnership networks across Africa, Asia and Latin America.

While maintaining separate legal entities and headquarters, CIFOR-ICRAF now operates under a single governing Board and leadership team, with a joint regional structure. Our over 700 dedicated staff work in 60 countries, with offices in 25. Our decades-long host country agreements with Indonesia and Kenya reflect their global leadership and commitment to nature-based solutions. We are deeply grateful for the financial support of our 159 funding partners and the collaboration of our 281 strategic partners.

In total, we have completed over 2,200 projects worth more than USD 2 billion in 92 countries. Through our over 25,000 research products and a suite of websites, news, social media and events, our message continues to mobilize an ever-growing audience, whether in academia, government or civil society.

The entities of the CIFOR-ICRAF network reinforce and advance our shared goals. As the leading global movement on sustainable landscapes, the Global Landscapes Forum has connected 1.5 billion people, from youth leaders to large multilateral donors. The Global Partnership for Forests, Trees and Agroforestry has launched a new phase of collaboration. And Resilient Landscapes is fast becoming a critical nexus between science, business and finance.

See online version at cifor-icraf.org/annualreport2021