



ANNUAL REPORT 2020

Building forward better

Letter from the Board and Management

At the start of 2020, few people predicted that a pandemic would soon transform daily life around the globe. But while COVID-19 has impacted every country, it has been experienced by people in many different ways.

CIFOR-ICRAF was uniquely equipped to address questions surrounding the source of COVID-19. Our wild meat experts were quick to respond to cries for the wholesale ban on wild meat with evidence-based perspective on the needs of those who rely on wild game as a source of protein and nutrients. This story and the others in this report – on improved tree seed and restoration work in Ethiopia, agroforestry in Southeast Asia, and a new model for sustainable use of woodfuel in refugee camps – demonstrate how, despite the pandemic restrictions, our researchers continued to deliver world-class science on forests and landscapes and to maintain our scientific record.

When key global meetings on climate change and biodiversity were postponed, we kept the conversation going through various online events, sharing the latest transformative

science and innovation to help shape national policies and provide evidence for decision making on sustainable land and forest use across the Global South.

At the same time, we continued charting our path as a merged organization, harmonizing our internal processes and refining our vision and mission. Our new 10-year strategy builds the business case for how trees, agroforestry and forests can help to address five major challenges: deforestation and biodiversity loss, accelerating climate change, unsustainable supply and value chains, the need to transform food systems, and extreme inequality for women, Indigenous Peoples and vulnerable rural communities.

New holistic approaches to delivering relevant and actionable solutions for both people and the planet include: Transformative Partnership Platforms; Engagement Landscapes; and Flagship Products, which we have launched in the course of 2020. These are unique approaches that bring partners together to design and facilitate the implementation of

transformative solutions aimed at achieving impact ‘on the ground’. In 2020, we also launched Resilient Landscapes, an innovative venture to radically transform land use and agricultural supply chains by serving as the nexus between science and businesses, finance, governments and civil society across forest and agroforestry landscapes.

Despite a challenging year in 2020, CIFOR-ICRAF staff have done a fantastic job of staying productive and impactful, and being supportive and empathic with our partners, beneficiaries and each other.

As 2020 ends with the promise of new vaccines and renewed hope on the horizon, we look ahead with both optimism and the determination to help ‘build forward better’ during the UN Decade on Ecosystem Restoration – and beyond. We look to a more resilient future in which healthy trees, forests and landscapes prevent the outbreak of zoonotic diseases, mitigate climate change, boost biodiversity and agricultural productivity, and promote health and well-being.



M Claire O Connor

Chair of the Board of Trustees



Robert Nasi

Managing Director, CIFOR-ICRAF
Director General, CIFOR



Anthony Simons

Executive Director, CIFOR-ICRAF
Director General, ICRAF

CIFOR-ICRAF Board of Trustees 2020

- » **M Claire O Connor**
Chair of the Board of Trustees
- » **Getachew Engida**
Vice chair of the Board of Trustees

- » **Alexander Müller**
- » **Bushra Naz Malik**
- » **Doris Capistrano**
- » **Kathleen Merrigan**
- » **Marja-Liisa Tapio-Biström**

- » **José Joaquín Campos Arce**
- » **Maria Teresa Cervera Goy**
- » **Kaoru Kitajima**
- » **Wanjira Mathai (until May 2020)**
- » **Vijai Sharma**

- » **Hamadi Iddi Boga**
- » **Agus Justianto**
- » **Anthony Simons**
- » **Robert Nasi**



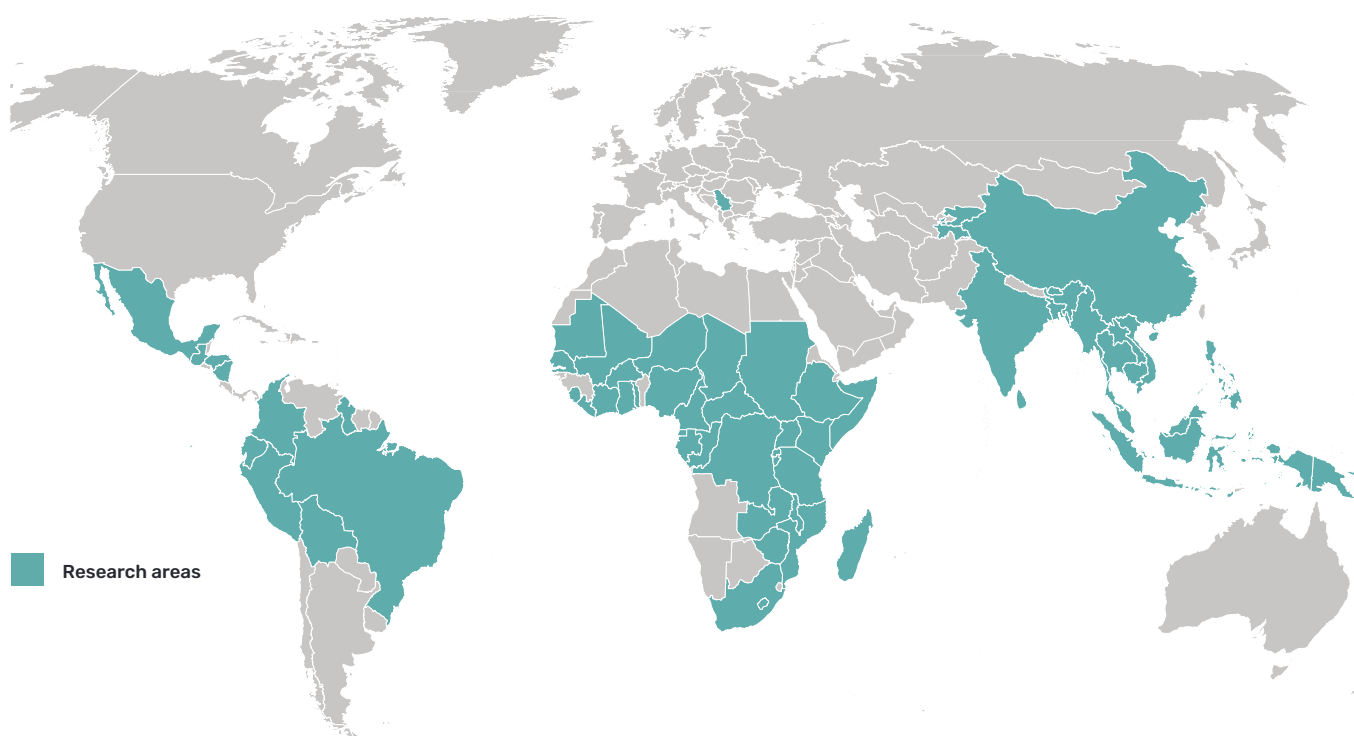
Our way of working

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 of 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.

CIFOR and ICRAF are members of CGIAR, a global research partnership for a food-secure future. CIFOR leads the CGIAR Research Program on Forests, Trees and Agroforestry (FTA) in partnership with ICRAF and other key organizations, and we work closely with the CGIAR Research Programs on Climate Change, Agriculture and Food Security (CCAFS), on Policies, Institutions and Markets (PIM), and Water, Land and Ecosystems (WLE).

Worldwide presence



Partnerships

| | |
|------------|--------------------|
| 64 | countries |
| 150 | funding partners |
| 88 | strategic partners |
| 279 | active projects |

Staff

| | |
|------------|-------------------------------|
| 730 | total staff worldwide |
| 292 | female |
| 438 | male |
| 635 | staff in developing countries |

Knowledge

| | |
|--------------------|--|
| 610 | publications |
| 1.9 million | downloads |
| 22K | citations |
| 1.2 million | views of Forests News and Agroforestry World |

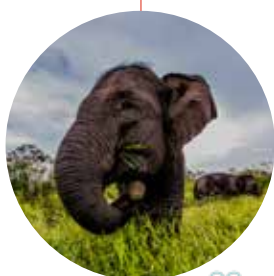
See our financial statements:

cifor.org/library/8030 | worldagroforestry.org/corporate-documents/audited-financial-statements-2020

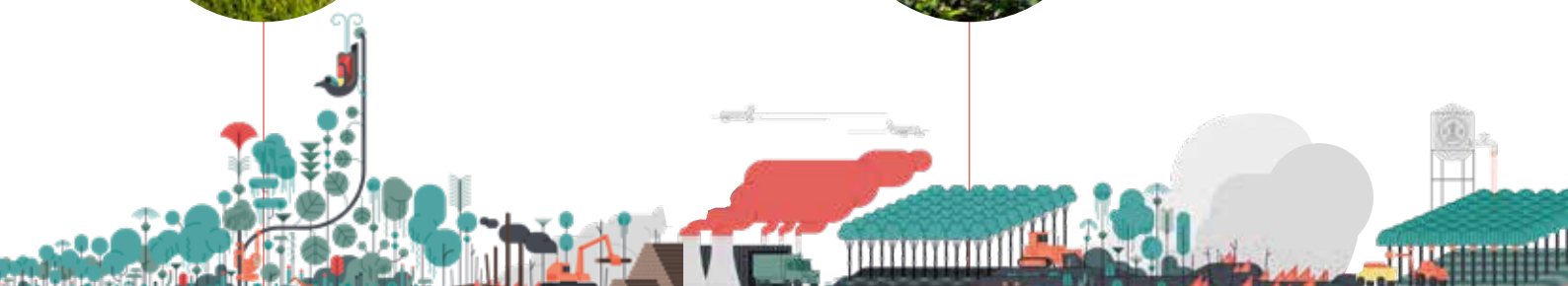
Addressing five global challenges

As the world reels from concurrent and successive crises, so much is clear: food, agricultural and forestry systems will need to change if we are to ensure a future worth living for succeeding generations. CIFOR-ICRAF provides actionable, game-changing solutions to five major global challenges:

1 Deforestation and biodiversity loss



2 A climate in crisis



CIFOR-ICRAF Strategy 2020-2030

This year we launched a new 10-year Institutional strategy, which outlines our approach to solving the five global challenges in a way that harnesses lessons learned from our nearly seven decades of combined experience and channels them into new ways of working.

CIFOR-ICRAF has a unique way of developing actionable solutions, from our focus on partnerships to our holistic systems approach to research, to our groundbreaking knowledge-led digital engagement. Through demand-driven and innovative research, capacity building and stakeholder engagement, our scientists promote the deep transformation needed for ambitious policies and practices

that can contribute to solving the five challenges.

Three new elements are designed to deliver timely, relevant solutions to global and national challenges:

- » **Transformative Partnership Platforms** – Alliances focused on one critically important issue
- » **Engagement Landscapes** – Geographic locations where we carry out concentrated, long-term work with diverse and committed partners
- » **Flagship Products** – Initiatives that provide action-oriented insights into key global issues.



Read the full strategy at:

cifor-icraf.org/about/strategy

Impact

This year, a new Quality for Impact (Q4I) team was created to accelerate, intensify and provide evidence for how CIFOR-ICRAF is translating quality research and development (R&D) interventions into sustainable and inclusive development impact. Q4I is capturing, tracking and communicating CIFOR-ICRAF's performance, supporting research quality reviews, and providing monitoring, evaluation, learning and impact assessment (MELIA) support to R&D initiatives. The team is also developing an integrated portfolio of 'fit-for-purpose' impact assessment and research methods to accelerate CIFOR-ICRAF's efforts to nudge human development onto a more inclusive and sustainable path.

These challenges interact and amplify each other in myriad ways. Our work addresses these challenges directly and in their complexity, contributing to long-term solutions as well as to global processes.

3 Transforming food systems



4 Unsustainable supply and value chains



5 Extreme inequality



The CIFOR-ICRAF network

Experience has taught us that turning scientific evidence into transformative action requires creative partnerships and clear communication channels. The entities of the CIFOR-ICRAF network reinforce and advance our collective aim to unlock the potential of trees and forests to combat climate change, biodiversity loss and land degradation.

Resilient Landscapes aims to radically transform land use and agricultural supply chains by serving as the nexus between science and businesses, finance, government and civil society across forest and agroforestry landscapes. resilient-landscapes.org

The Global Landscapes Forum

is the world's largest knowledge forum on integrated and sustainable land use; since its creation, it has reached more than 995 million people from 185 countries – including many youth, Indigenous, rural and women's groups. globallandscapesforum.org

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

is the world's largest research for development programme 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 ICRAF, the Alliance of Bioversity International and CIAT, CATIE, CIRAD, INBAR and TBI. foreststreesagroforestry.org

See page 16 onwards for 2020 updates from these initiatives.

Resource mobilization

The new, harmonized CIFOR-ICRAF Resource Mobilization (RM) Unit made major progress in identifying and disseminating funding opportunities through the new CIFOR-ICRAF RM Opportunities portal, including dedicated 'cradle-to-grave' support for submissions development and due diligence. The joint Resource Mobilization and Partnerships Committee was also established and is supporting the RM and Partnerships teams. Harmonization is ongoing between RM and other corporate support units to ensure further effective support to institutional delivery, and a draft joint RM Strategy and related policies are in the works.

CHALLENGE 1

Deforestation and biodiversity loss



Human survival is intrinsically linked to forests, yet deforestation and forest degradation continue at alarming rates, increasing the risk of mass extinctions and new infectious diseases. CIFOR-ICRAF's work on tree genetic resources, restoration, sustainable forest management and soil and land health has raised the importance of trees and biodiversity globally.

Taking land restoration successes to scale in East Africa and the Sahel

Land restoration can be a key pathway to achieving food security and improving livelihoods for some of the most vulnerable people living in Africa's drylands. But as the UN Decade on Ecosystem Restoration draws closer, it has become clear that scaling up restoration efforts requires **options** that will work for different people in different places – not a one-size-fits-all approach.

A five-year project funded by the EU and IFAD started with the recognition that farmers are agents of change: as stewards of the land, they are constantly innovating. Therefore, empowering farmers to test and



Researchers also identified potential synergies between restoration practices and gender equality, engaging with over 500 farming households to learn how the new restoration methods introduced by scientists affected livelihoods and the division of labour between men and women. "Women, in particular, face challenges related to food security because they tend to be the main food providers," said Leigh Winowiecki, a soil systems scientist and leader of the Soil and Land Health theme.

Scientists discussed their findings in the IFAD podcast 'Building back better: Land restoration, gender and research 'in' development'.

worldagroforestry.org/blog/2020/10/09/podcast-building-back-better-land-restoration-gender-and-research-development

New book from the COLANDS project: Operationalizing integrated landscape approaches in the tropics

cifor.org/knowledge/publication/7800

compare different restoration efforts such as increasing crop diversity and implementing agroforestry and tailored soil and water conservation methods – an approach known as 'options by context' – could help them meet challenges as they arise.

By bringing key partners from the public and private sectors, research, extension, market and governance institutions to work together in a co-learning cycle, the project helped create communities of practice that were able to better use their resources to restore degraded land. Over 100,000 beneficiaries were reached directly and indirectly across Niger, Mali, Ethiopia and Kenya. In Kenya, tree survival on farmers' fields increased from 30 percent in 2016 to over 80 percent in 2019.

over

50%

of the world's tropical forests have been destroyed

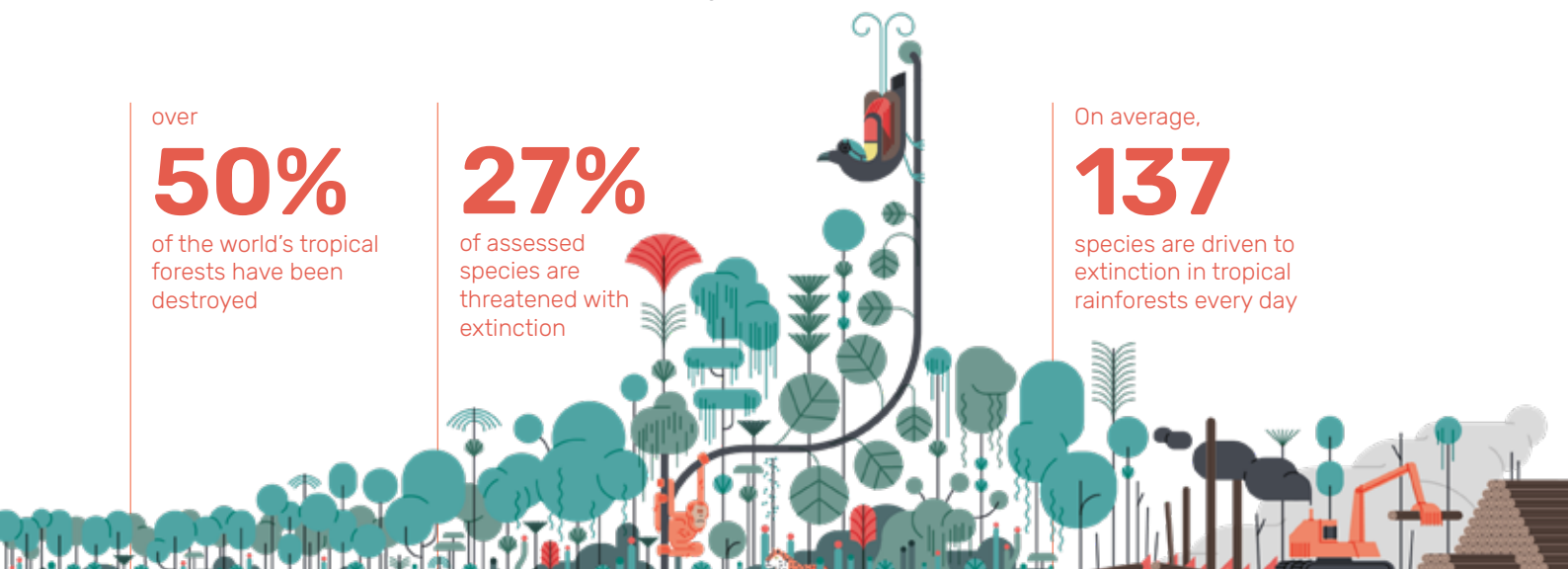
27%

of assessed species are threatened with extinction

On average,

137

species are driven to extinction in tropical rainforests every day



"If partners are given time to adapt and adopt the project's activities, these collaborative efforts are expected to help put Ethiopia's restoration goals on the path to sustainability."

Søren Moestrup, Senior Team Leader for PATSPO

Better quality tree seeds in Ethiopia

Ethiopia's green growth strategy includes a commitment to restore more than 20 million hectares of degraded forest landscapes within the next 20 years – one of the world's most ambitious forest landscape restoration programmes. The NICFI-funded Provision of Adequate Tree Seed Portfolio in Ethiopia (PATSP0) project is designed to improve the productivity and resilience of forest landscape restoration in the country.

Since 2017, PATSP0 has supported the Government of Ethiopia through the provision of high-quality tree seeds of priority species, for large-scale restoration plantings. The project has also strengthened existing tree-seed organizations and supported the establishment of additional private and government seed dealers.

"As a result of these efforts, both the physical and genetic quality of seed has improved," said Kiros Hadgu, a CIFOR-ICRAF scientist and country representative for Ethiopia.

PATSP0 conducted sector analysis and, in partnership with the Environment, Forest and Climate Change Commission (EFCCC), established the national Tree Seed Network to foster collaboration among all stakeholders in the tree seed sector, including private companies.

The project has also provided species-specific knowledge for priority species, a critical mass of tree genetic resources for the future, and capacity development to monitor and deliver quality seeds and seedlings of the species required for large-scale restoration. An atlas on the distribution of 150 tree species in Ethiopia is being finalized, as well as an app called 'What trees to plant where'.



26

breeding seed orchards of 13 priority tree species (mostly indigenous) established at 10 sites in collaboration with AFE, OFWE and EFFRI



25

training courses (400+ participants) on technical and information aspects of tree seed procurement and tree improvement



80+

training materials (posters, technical notes), technical reports and guidelines, and leaflets



Check out our posters on seed sources and habitat distribution of tree species!

worldagroforestry.org/project/PATSP0/posters



CHALLENGE 2

A climate in crisis

"Our role of independent international observer and credible analyst of the REDD+ process, along with an ability to reach and convene diverse stakeholders and stimulate debates, make us a unique player in this space."

Amy Duchelle, Team Leader for Climate change, energy and low-carbon development



Despite clear scientific consensus, the effects of global heating on ecosystems and human health continue to rise. CIFOR-ICRAF is providing evidence and analysis of nature-based solutions to the climate crisis, such as sustainable forest and wetland management, agroforestry, and landscape restoration.

GCS REDD+ marks another milestone

The Global Comparative Study on REDD+ (GCS REDD+) wrapped up its third phase in 2020, focused on assessing policy design and the impacts of actions to 'reduce

emissions from deforestation and forest degradation' (REDD+). Through a series of virtual national stakeholder **workshops**, GCS REDD+ brought together policymakers, practitioners, researchers and donors to discuss the latest knowledge on REDD+ and how to translate it into action.

In Peru, CIFOR-ICRAF worked with Peru's Protected Areas Service (SERNANP) to codevelop the tool 'How are we doing?' (*¿Como Vamos?*), which enables participatory reflective monitoring of multistakeholder forums. In Vietnam, scientists have been invited to join a National Task Force to develop Vietnam's Forestry Development Strategy (2020–2030). And through deep engagement in Indonesia and

Peru, GCS REDD+ provided technical support for the inclusion of peatlands in the countries' respective Forest Reference Emission Levels (FREL) and contributed to the Peruvian National Strategy on Forest and Climate Change. cifor.org/gcs/partners



Find out about different REDD+ projects around the world on. ID-RECCO – the largest global database on REDD+ projects and programmes

reddprojectsdatabase.org

75%

of the world's food is generated from only 12 plant and 5 animal species

23%

of human-caused greenhouse gas emissions are from forestry, agriculture and other land uses

Peatlands are the largest natural carbon store, holding over

550

billion metric tons of carbon



"These collaborative efforts on wetlands are very timely and central to developing research-based strategies to tackle climate change"

Daniel Murdiyarso, Principal Scientist and recipient of the Habibie Prize 2020

SWAMP continues to leverage new opportunities for deeper emission cuts

Knowledge generated by the Sustainable Wetlands Adaptation and Mitigation Programme (SWAMP) triggered policy processes with Indonesia's Ministry of National Development Planning (Bappenas), leading to a Ministerial Decree in October 2020. This formed the legal basis to establish a Strategic Coordination Team tasked with meeting the SDGs and low-carbon development agenda through the development of a roadmap of management strategies for peatland and mangrove ecosystems.

SWAMP also contributed to greater confidence in improving Indonesia's FREL following its diagnosis of missing sources and sinks of GHG emissions. cifor.org/swamp/about-us/partners

Agroforestry in Southeast Asia policy

Agroforestry – growing trees on farms – can provide alternative resources, diversify livelihoods and mitigate the impacts of climate change. With support from the Swiss Agency for Development and Cooperation, CIFOR-ICRAF brought agroforestry expertise to the ASEAN-Swiss Partnership on Social Forestry and Climate Change (ASFCC), a 10-year multi-partner collaboration with far-reaching impacts in Southeast Asia.

"We led the development of the ASEAN Guidelines for Agroforestry Development, provided technical support to Vietnam's Ministry of Agriculture and Rural Development – which revised its national forestry law to include agroforestry – and facilitated the agroforestry roadmap for Cambodia," said Delia Catacutan, Regional Coordinator for Southeast Asia.

CIFOR-ICRAF collaboration with the Green Climate Fund

The Green Climate Fund (GCF) recognizes that keeping global warming below 2 degrees requires nature-based solutions. CIFOR and COWI were selected by the GCF to write the Sectoral Guides on forests and land use, and on ecosystems and ecosystem services. CIFOR-ICRAF is involved in a number of GCF-supported projects:

- » In The Gambia, where annual rainfall has decreased and become more erratic and temperatures have risen by up to 2 °C, scientists are providing technical support to the government to use an 'ecosystem-based adaptation (EbA)' approach to restore degraded community forests and community protected areas, reduce human–wildlife conflict and help move the country towards climate resilience.
- » In Sri Lanka, CIFOR-ICRAF partners across government are pioneering highland restoration to protect the water storage capacity of reservoirs – vital for irrigating lowland rice – and are introducing payments for environmental services to sustain it. This addresses the climate change double whammy of higher, more intense and erosive rainfall in the uplands but increased drought in the lowlands, where much of the nation's staple food is grown. CIFOR-ICRAF also acts as delivery partner to support the National Designated Authority in implementing a GCF 'readiness' project.



Knowledge Tree on Social Forestry is a rich source of information about social forestry practices in Southeast Asia, based on 10 years of ASFCC research



CHALLENGE 3

Transforming food systems

"Using location-specific data allowed us to not only capture the socioecological dynamics of smallholders' food production diversity, but also to use individual food consumption data to better understand and fill both harvest and nutrient gaps"

Stepha McMullin, Scientist

The world's food production and distribution systems are deeply flawed: unsustainable agricultural practices continue to destroy forests, degrade land and intensify climate change, while over two billion people experience some type of malnutrition. By supporting landscape management practices and local innovations to sustainably produce diverse foods and maintain and enhance ecosystem services, CIFOR-ICRAF is finding ways to promote healthy diets – without overshooting planetary boundaries.



See our series of nutritious food portfolios

worldagroforestry.org/project/foodtrees/publications

Explore the world of forest foods in our illustrated feature

cifor.org/feature/foodfromforest/

Food tree 'portfolios' help fill the nutrient gap in East Africa

Trees that are a source of edible fruits, vegetables, seeds, nuts and edible oils have traditionally been used to complement and diversify staple-based diets. When integrated into agroforestry systems, they can contribute substantially to food and nutrition security for smallholders – possibly for generations.

In East Africa, the Food Trees project, funded by the European Union, IFAD and GIZ, co-developed tailored 'food tree portfolios' with farmers to address the challenges of seasonal food availability and micronutrient deficiencies – particularly vitamins



17

customized food tree portfolios developed across Kenya, Uganda, Ethiopia and Somaliland



>90

food tree and crop species identified across nine sites in Kenya, Uganda and Ethiopia, with nutritional information available for species at apps.worldagroforestry.org/products/nutrition



~20

species (food trees with complementary vegetable, pulse and staple crops) recommended per portfolio for farmers to select

A and C, and iron and folate. The portfolios combine locally available and culturally acceptable food tree species that can be harvested consecutively to provide year-round nutritious foods.

Researchers identified specific food-insecure periods and nutrient gaps in diets through surveys and discussions with farmers. The portfolio approach can be adapted to different locations with diverse agro-ecological conditions, as well as to variations in species' suitability, fruit-tree phenology and farmers' preferences.

30%

of food is lost or wasted

26%

of all greenhouse gas emissions result from food production

11%

of people are under-nourished



Up to
11 million



tons of wild meat are harvested per year in rainforests alone; much more if we add other biomes (savannas, temperate and boreal forests)

5-fold increase



in Emerging Infectious Disease (EID) events between 1940-2010

60%



of all EID events are dominated by zoonoses, the majority of these originate in wildlife and are increasing significantly over time

How to prevent the next pandemic

When the reality of the COVID-19 pandemic hit, CIFOR-ICRAF was in a unique position to respond. For over 20 years, our wild meat experts have researched the implications of interactions between wild animals and humans in forested landscapes – including zoonotic diseases – and recently collaborated with the Convention on Biological Diversity on joint guidelines for a sustainable wild meat sector.

Amid the sudden cries to ban wet markets and the harvesting, trade and consumption of wild meat worldwide, CIFOR-ICRAF scientists stepped up with evidence in hand. In March 2020 they published a *Forests News* editorial demonstrating how such a ban would put millions of communities who have no other source of affordable protein – many of them Indigenous Peoples – at risk of malnutrition.

“Unsustainable harvesting of wild meat is a major driver of biodiversity loss, but the real issue lies with massive rural–urban migration. As people

bring their taste for wild game to the city, they create a demand that fuels widespread illegal hunting, threatening to leave behind ‘empty forests,’” explained Robert Nasi, Managing Director of CIFOR-ICRAF.

Through the **Sustainable Wildlife Management programme**, CIFOR and partners are developing models to conserve wildlife while improving the food security of people who rely on wild meat for nutrition. And in partnership with Oxford University and the Wildlife Conservation Society, scientists are assessing the pandemic’s influence on perceptions around wild meat consumption and wildlife management policies.

In April, experts held a **webinar** to discuss what COVID-19 means for wild meat, and in June Dr Nasi was invited to serve as a panellist at a **briefing to US congressional staff** and Washington-based agencies organized by the International Conservation Caucus Foundation. He shared evidence linking ecosystem fragmentation and degradation to the emergence or re-emergence of diseases such as malaria, dengue fever

and Lyme disease, including recent CIFOR-ICRAF research on deforestation and **Ebola**.

August saw the launch of a **new project** supported by UK Research and Innovation (UKRI) that aims to identify and mitigate the impacts of COVID-19 on legal and sustainable wildlife trade in low and medium-income countries. The UKRI GCRF TRADE Hub Indonesia also **launched** this year and held a **webinar** on COVID-19 and the wildlife trade in Papua.

Finally, in October, the Collaborative Partnership on Sustainable Wildlife Management and FAO released a **joint statement** outlining four guiding principles to reduce the risk of zoonotic diseases through ‘nature-based stimulus packages.’



The **WILDMEAT database**, currently being developed with support from USAID and the US Fish and Wildlife Service, can be used to identify areas where key vector species (i.e. bats, primates, pangolins) are being hunted or traded, potentially helping to predict hotspots where viruses could spill over into human populations.

wildmeat.org

Read our feature story on COVID-19 and wild meat.

cifer.org/feature/covid-19-and-wild-meat



CHALLENGE 4

Unsustainable supply and value chains



Despite fanfare over private-sector commitments to zero deforestation and sustainable supply chains, evidence of real change remains elusive, while global consumption of forest commodities continues to increase. CIFOR-ICRAF helps translate sustainable production into income, illustrating how trade and investments in a diversity of forest and tree products can have positive impacts on rural livelihoods while minimizing negative impacts on the environment.

Experiment in financing community forest enterprises in Cameroon pays off

As for most countries in Central Africa, many people in Cameroon depend on forests for a living. But while the sector has strong potential to transform the lives of millions of forest-dependent communities, access to finance is a major challenge – especially for community forest enterprises (CFEs).

The FCDO-funded DRYAD project, a five-year initiative led by CIFOR-ICRAF, took an innovative approach to bridging the finance gap for CFEs. DRYAD was an experiment in deploying public finance to de-risk and prepare community forest enterprises for private investment through a performance-based finance approach. Although DRYAD did not make investments like a bank or private asset manager, it still sought a 'return' on its commitment of public capital – measured by the fulfilment of important social, commercial and environmental objectives rather than solely money.

 **487**

jobs created (225 women and 262 men), with a wage value of over USD 53,000 annually

 **44%**

of full-time employees were young people

 **84 CFEs**

had sustainable business cases developed

Through a combination of innovative financing, technical support and monitoring, DRYAD supported nine types of enterprises – from cassava to timber to rattan fish – for 34 CFEs. By the close of the project in June 2020, 29 of the 34 were in operation, recording a failure rate of less than 6%, compared to the average national failure rate of 90% in the first year.

"DRYAD has demonstrated the potential of CFEs to contribute to Cameroon's economic, social and environmental development, and has provided important lessons on ways of financing and supporting CFEs to generate benefits," said Peter Minang, Principal Investigator for the project.

A special edition of *Ecology and Society* drew on lessons from DRYAD in its review of 20 years of community forestry in Cameroon.

80%

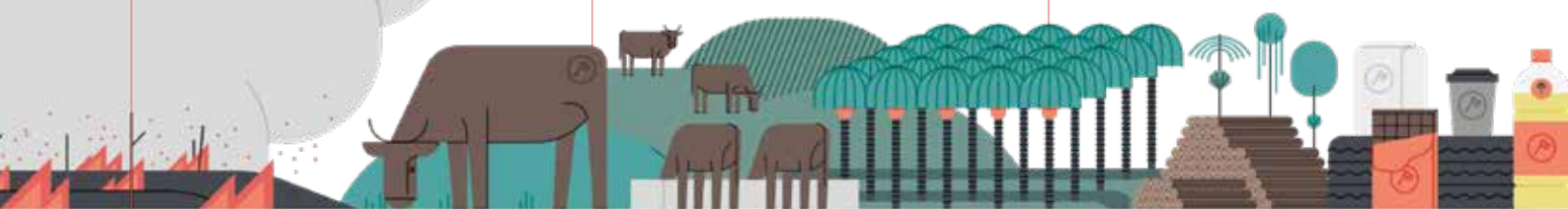
of deforestation in the Amazon is due to cattle ranching

75%

of soy production is used as feed for livestock

50%

of supermarket products contain palm oil



“Long-term engagement is a promise we make to our partners, including entrepreneurs and local populations in the landscapes where we work. We have no magic recipes to immediately make the unsustainable sustainable, but being part of the local social fabric allows us to work together towards common, more sustainable goals.”

Paolo Cerutti, Senior Scientist and Interim Hub Leader for Nairobi

Building sustainable cocoa communities in Côte d'Ivoire

Côte d'Ivoire is the world's leading producer of cocoa (*Theobroma cacao* L.), with 800,000 smallholders producing nearly 40% of the world's supply of 'brown gold' on about 2 million hectares of land. But many of these communities are living below the poverty line, struggling as their ageing orchards face crop disease outbreaks, yielding less and less cacao fruit. Over decades, a lack of improved germplasm and inputs such as fertilizer have resulted in degraded cocoa landscapes.

With support from the Ministry of Agriculture and Rural Development and Mars, Inc., the Vision for Change (V4C) project is helping to revitalize the country's cocoa sector through a combination of agricultural support and community development.

In 2020, an [analysis](#) of the factors that influence whether farmers introduce new tree species on their cocoa farms found that the number

of new species rose with farmers' tree planting experience and with how much they expected to benefit from the trees. Farmers mainly selected species that provide shade for cocoa or that yield fruit or other valuable products. When clearing land for cocoa production, farmers spared timber and indigenous and exotic fruit and nut species. This suggests that increasing the number of exotic fruit tree species could help diversify incomes and reduce food and nutritional insecurity in cocoa-producing zones.

V4C continues to search for solutions to cocoa swollen shoot disease (CSSD), which is devastating thousands of hectares of cocoa fields. Without any resistant varieties of cocoa or methods to treat CSSD, farmers are in despair. CIFOR-ICRAF studied on-farm rehabilitation approaches using improved hybrid varieties and elite clones, and examined the potential of biological control and biopesticides to manage mealybugs – the insects that transmit the disease – with promising results.



New steps to protect Central Africa's forests

National and regional timber markets are booming in Central Africa, but since most local demand is met by the informal logging sector, producers lack the incentives to become more sustainable and profitable – and governments are missing out on revenues.

A new project funded by the French Facility for Global Environment (FFEM), PROFEAAC takes an integrated approach to the formalization of artisanal logging in Cameroon and the DRC by linking the sustainable management of wood resources to the promotion of demand for legal sawnwood in private and public markets.

In other research, CIFOR-ICRAF published an analysis on the negotiation and monitoring of social clauses in the context of the WWF forest governance programme in the DRC.

And the new Central African Forests Observatory (OFAC) online platform serves as a single-entry point for researchers and decision makers to find information on policies and trends to inform decisions on the conservation and sustainable use of ecosystems.

observatoire-comifac.net/analytical_platform

Interventions in the Yangambi landscape continued to break ground in the DRC's Tshopo Province, with a new state-of-the-art CongoFlux tower to measure carbon in the Congo Basin and the establishment of the Yangambi Engagement Landscape – a flagship model for the engagement landscape concept, which forms a central part of CIFOR-ICRAF's new 10-year strategy.

cifor.org/yangambi



CHALLENGE 5

Extreme inequality



Women, rural communities and Indigenous Peoples continue to face reduced access to basic human needs and livelihood opportunities – and the economic fallout from the COVID-19 pandemic is expected to push an extra half a billion people into extreme poverty. CIFOR-ICRAF is committed to addressing these inequalities and supporting practices of governance that lead to positive change.

Making woodfuel part of the solution for refugees in Central Africa

In eastern Cameroon's forest-savanna transition zone, refugees who fled civil war in the Central African Republic are living in camps and within host communities. As for internally displaced people from other regions of Cameroon, they have few livelihood options

available. Collecting and trading firewood is critical to their food security.

When a large influx of people settle in a new area, the sharp surge in demand for land and natural resources, including wood, can lead to degradation and deforestation, leaving room for further conflicts in ecologically sensitive landscapes. Nutritious foods provided through humanitarian aid, such as cereals and beans, take a long time to cook. So when woodfuel is scarce, displaced families have no choice but to walk long distances or to reduce cooking time, eat fewer meals and stop boiling water – putting them at risk of malnutrition and disease.

With support from the EU, CIFOR-ICRAF and local partners have supported an integrated landscape-level intervention in the town of Garoua-Boulai and the Gado-Badzéré refugee camp since 2018. They are engaging local communities

and refugees in joint restoration initiatives, ranging from tree planting to participatory tree management. Activities include developing agroforestry systems with native food trees to increase local tree cover and support nutritious diets, and promoting tree species that can be used for fuel. Researchers have set up consultation forums to negotiate land-use norms and minimize conflict, and are promoting the use of energy-efficient stoves that use less wood.

To mitigate the environmental impacts of displacement in sub-Saharan Africa, CIFOR-ICRAF has established an Engagement Landscape to test, scale and implement this model and other alternatives. "These models can be adapted to each context as soon as displaced people begin arriving, to reduce the likelihood of rapid deforestation, degradation and social conflicts," said scientist Abdon Awono, who leads activities in Cameroon.

On average,

10%

of people live in extreme poverty, including one in five children

Of those living in extreme poverty, more than

90%

depend on forests for at least part of their livelihoods

In developing countries,

43%

of agricultural workers are women




The transformative potential of inclusive research

In 2020, CIFOR-ICRAF continued to champion equity and equality across its research projects, including several that focus specifically on issues facing women in forest landscapes and agroforestry. Highlights include:


- » research on gender-transformative approaches to women’s land rights in Kyrgyzstan, Uganda, Bangladesh, The Gambia, Colombia and Ethiopia – supported by IFAD;
- » an experimental study in northern Ghana on the effects of gender transformative approaches on smallholder households’ resilience and capacity to sustainably engage in land restoration;
- » a collaborative study across several CGIAR Research Programs on the ‘feminization of agriculture’, exploring the gendered impacts of migration on small-scale farming in Vietnam and Kenya;

- » a guide to promote reflexive and adaptive learning processes in **multistakeholder forums** for gender-transformational change – supported by RRI;
- » ongoing research into identifying and addressing gendered vulnerabilities under climate change in the shea value chain in Burkina Faso and Ghana – supported by IDRC.

Gender experts also continued their work on integrating gender into the UN Convention on Biological Diversity (CBD)’s post-2020 Global Biodiversity Framework through engaging in a virtual expert workshop hosted by CBD, UN Women and UN Environment, and developing targeted submissions to inform the CBD Gender Plan of Action and the post-2020 monitoring framework.




After agriculture, woodfuel production and trade is the main occupation in the landscape of Garoua-Boulai



Inside Gado-Badzere refugee camp

100%

of households use firewood as the main energy for cooking



In the city of Garoua-Boulai alone, annual woodfuel consumption amounts to


239,000 tons

of firewood (329,820 m³ roundwood equivalent) and

63,500 tons

of charcoal (584,492 m³ roundwood equivalent)





A gender-inclusive approach to woodfuel

Women and children make up the majority of displaced people, and the need to travel long distances to collect firewood puts women and girls at risk of harassment and assault. In the Cameroon woodfuel project, research was informed by **interviews** with women refugees.

In other work, CIFOR-ICRAF experts have developed a **framework** for incorporating gender analysis in research and policy making in the **charcoal** sector. And an episode of the ‘Let’s Talk Trees’ **podcast** features CIFOR-ICRAF scientist Mary Njenga and Associate Director for Gender Initiatives at Pennsylvania State University Ruth Mendum sharing their experiences working with refugee communities in Uganda, Kenya and Ethiopia.

Podcast
worldagroforestry.org/blog/2020/06/29/why-energy-and-food-nexus-critical-refugee-context

Framework
cifor.org/knowledge/publication/7497



Gender publication highlights

Gender-responsive project implementation within the Resilient Food Systems Programme

resilientfoodsystems.co/assets/resources/pdf/rfs_gender-activities-and-guidelines_29_01_21.pdf

Forest tenure pathways to gender equality: A practitioner’s guide

cifor.org/knowledge/publication/7909

Resilient Landscapes



Landscape restoration and bioenergy production for local economic growth in Serbia

Demand for woody biomass in Serbia and the Balkans has been growing exponentially. This project focuses on supply deals with large buyers to stabilize the local biomass market and ensure higher revenue for small- and large-scale growers. It is anticipated that this will result in greater investments along the supply chain.

CIFOR-ICRAF and E3I, an experienced and locally connected expert on sustainable energy, have jointly developed a project that meets concrete local business demands and delivers positive socio-environmental impacts for the region. Leveraging CIFOR-ICRAF's science, Resilient Landscapes is working to secure impact investment and ensure a high level of project performance in terms of generating revenues and meeting environmental, social and governance (ESG) compliance.



Resilient
Landscapes

resilient-landscapes.org

Leveraging science to help businesses reach their climate and biodiversity goals

Resilient Landscapes is an innovative CIFOR-ICRAF venture, which aims to leverage science and research in scaling up investments in nature-based solutions to tackle climate change, deforestation, biodiversity loss and land degradation. It promotes strategic public-private partnerships through joint project design, benefit sharing and robust performance metrics generating financial, social, and natural capital dividends for investors and businesses.

Resilient Landscapes' mission is to scale up investments in nature-based solutions across landscapes and commodity supply chains by promoting science-based business cases; mobilizing financial investments; facilitating public-private partnerships; and ensuring environmental, social and governance (ESG) compliance.

The initiative delivers a unique range of products, services and relationships developed through evidence-based analysis and design. It does this in collaboration with different public, private and civil society actors through contractual

or partnership agreements across multiple scales.

Resilient Landscapes assesses projects through five interconnected criteria: Technical Feasibility, Financial Viability, Operational Deliverability, Social/Political Acceptability and Environmental Sustainability.

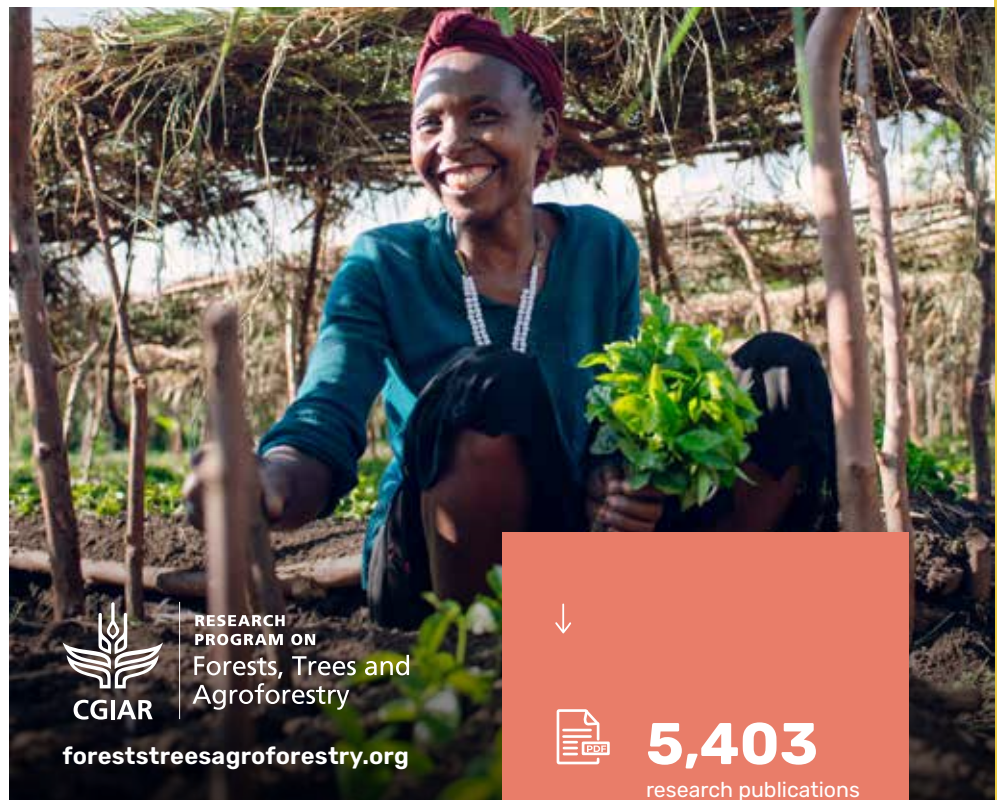
Resilient Landscapes leverages CIFOR-ICRAF's long-established partnerships with governments, donors, multilateral institutions, academia, NGOs, local communities, farmers, and youth and women's groups.

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

In 2020, FTA put in place a proactive management plan to adapt its plan of work and maximize delivery despite the Covid-19 context. Flagships 1 and 2 (FP1-2) initiated Transformative Partnership Platforms respectively on Transforming the Quality of Tree Planting (TQTP) and on Agroecological Approaches to Building Resilience of Livelihoods and Landscapes. FP3 developed, with its partner Tropenbos, the Inclusive Method for Landscape Analysis of Financial Flows (IMLAFF), piloted in key landscapes in Indonesia, Ghana and Uganda. FP4 influenced the restoration discourse globally through its “from tree planting to tree growing” paradigm, which was adopted by The Gambia and contributed to a national agroforestry policy development process. FP5 initiated a biocircular economy stakeholder consultation process, paving the way for another Transformative Partnership Platform. FTA’s gender research informed multistakeholder low-emissions development workshops organized by the Governors’ Climate and Forest (GCF) Task Force and UNDP, covering 30 jurisdictions in Mexico, Peru, Brazil and Indonesia.

FTA’s Monitoring, Evaluation, Learning and Impact Assessment team documented FTA’s progress in addressing key global challenges for which FTA is expected to deliver development outcomes.

2020 also marked the organization of FTA’s decadal conference, gathering more than 520 participants, with 200 scientific outputs (bit.ly/FTASciCon2020). FTA strengthened collaborations with the International Regulatory Strategy Group (IRSG) and FAO on adaptation to climate change (e.g., international workshop on rubber and climate change, co-publication with FAO on forests and trees in National Adaptation Plans).



An independent review, commissioned by CGIAR outlined FTA’s “high scientific productivity and strong implementation performance”, and stated that the programme was “likely to make significant progress toward most planned end-of-program targets”. The review also highlighted the “close collaboration between FTA partners, and between universities and research institutions”. According to the review, FTA’s “efficient governance, and the effective prioritization and management of resources resulted in a high level of programmatic value-added”.

FTA stood out of the 12 reviews of CRPs by ranking first in terms of collaboration and by being in the top 3 for policy innovations and progress against programmatic outcomes.



5,403

research publications



36,493

citations



1,828

altmetric scores



1,158

affiliations



388

projects



49

donors

Global Landscapes Forum

The Global Landscapes Forum (GLF) saw unprecedented digital growth during 2020, marked by the COVID-19 pandemic. It pioneered digital conferencing in the environmental space to connect the globe and fill science and knowledge gaps with its first fully digital conference in June.

7,400+

organizations engaged through GLF events, campaigns and programmes

995 million

people reached through social and global media

185 countries

connected through GLF events and programmes

30

world-leading development institutions serving as GLF Charter Members



Events

In 2020, GLF ran two major digital events, which over 10,000 people attended and millions more engaged with online:

- » **GLF Bonn 2020: Food in the time of crises**, the first environmental digital conference of its kind – with over 300 speakers, hundreds of organizations, 235,000 engagements on social media, 22,000 messages plus 2,500 articles exchanged among participants – highlighted the need for platforms like GLF to continue including the voices of diverse knowledge holders from every corner of the world.
- » **GLF Biodiversity: One World – One Health** – reached tens of millions of people, spotlighted ecosystem restoration and contributed to the next global biodiversity roadmap, advancing the global drive to ‘build back better’ with a set of seven policy recommendations.

UN Decade on Ecosystem Restoration – the GLF has been named an official core partner in preparation

for the UN Decade on Ecosystem Restoration, 2021–2030.

Food Systems, Land Use and Restoration (FOLUR) Impact Program – contributing to strategic knowledge management and communications in this World Bank-led platform.

Youth in Landscapes – engaging **60,000+ youth** in landscape restoration. This year the initiative launched the Restoration Stewards programme, which provides funding and mentoring for six youth-led restoration projects in Africa, Latin America and Asia.

Learning – developing professional courses on the free online learning platform **Landscape Academy** (on GLF’s five themes) with 18,000+ learners so far.

GLFx – building a global community, **GLFx**, to enable and accelerate action towards more sustainable landscapes.

Sustainable finance – partnering with the Government of Luxembourg to mainstream sustainable finance at the GLF Luxembourg Investment Cases event.

Communications, outreach and engagement

Translating science into action

CIFOR-ICRAF takes a strategic approach to communications, outreach and engagement. Through robust science journalism, landmark events and innovative digital platforms, we bring targeted information to all of our stakeholders on game-changing solutions to the five global challenges.

By 2023, two-thirds of the global population will have internet access and 70 percent will have mobile connectivity. CIFOR-ICRAF leverages

its digital engagement and delivery platforms to simultaneously connect stakeholders at all levels of society and across geographies, from scientists to farm families to policymakers in numerous countries around the world. We are creating new digital engagement formats for innovative collaborations that have never existed before. We are transforming leading scientific exploration and direct experience in landscapes, together with finance and governance, into living knowledge that addresses the five global challenges.



2.1 million

website page views,
a **1%** increase



42.8 million

reached on core
social media channels



1.2 million

views of Forests News
and Agroforestry World,
an **11%** increase



32 million

reached on Twitter,
a **181%** increase



610

publications



7.6 million

reached on Facebook,
a **153%** increase



1.9 million

publication downloads, down
32% due to production decrease



2.1 million

reached on Instagram



22K

citations, a **15%** increase



1.1 million

reached through LinkedIn,
a **25%** increase



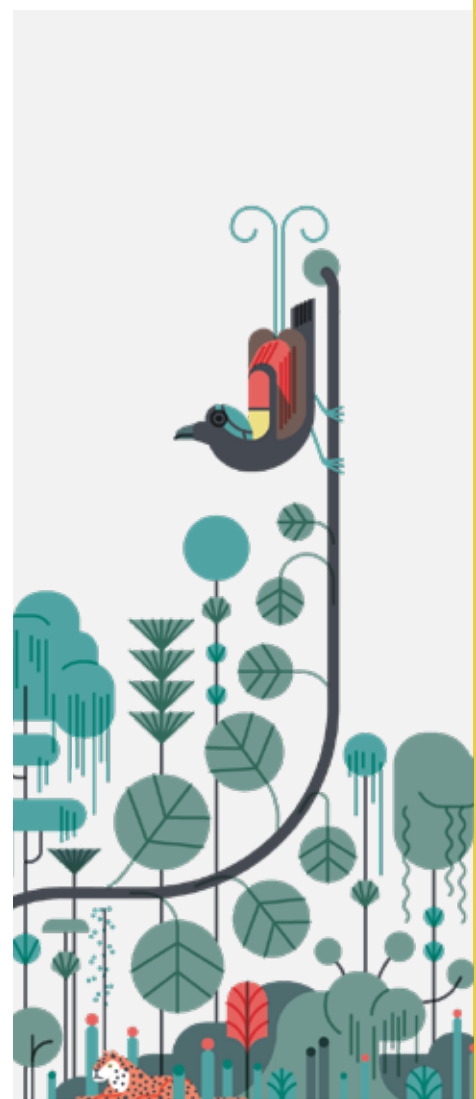
2.2K

media articles about CIFOR
and ICRAF, a **10%** decrease



596K

YouTube video views,
a **32%** increase





CIFOR-ICRAF

The Center for International Forestry Research (CIFOR) and World Agroforestry (ICRAF) envision a more equitable world where trees in all landscapes, from drylands to the humid tropics, enhance the environment and well-being for all. CIFOR and ICRAF are CGIAR Research Centers.

cifor.org | worldagroforestry.org

Production: CIFOR-ICRAF Communications, Outreach and Engagement Team

Writing: Erin O'Connell, with contributions from Susan Onyango and CIFOR-ICRAF scientists

Proofreading: Sarah Oakes

Design and layout: Mardiyah Alexandra Miller and Perdana Maulansyah Putra

Infographics: Mike Rossi (micrografik.com)

Infographic sources: pp. 6: (i) Deforestation and forest degradation, IUCN - IUCN Redlist; (ii) Rainforest Animals, Rainforest Action Network; pp. 7: (i) PATSPO Progress Reports 2017-2021; pp. 8: (i) Adapting agriculture to climate change, FAO; (ii) Special report: Climate change and land, IPCC; (iii) Peatlands and Climate Change, IUCN; pp. 10: (i) orange box: Food trees for diversified diets, improved nutrition, and better livelihoods for smallholders in East Africa; (ii) bottom: Food wastage footprint, FAO; Environmental impacts of food production, Our World in Data; (iii) SDG 2, UN; pp. 11: (i) Fa et al. 2016. Differences between Pygmy and Non-Pygmy hunting in Congo Basin forests; (ii) Jones et al. 2008. Global trends in emerging infectious diseases; (iii) Morse et al. 2012. Prediction and prevention of the next pandemic zoonosis; pp. 12: (i) orange box: DRYAD: Sustainable management of community forests in Cameroon, CIFOR-ICRAF; (ii) bottom: Cattle ranching in the Amazon Region, Global Forest Atlas, Yale School of the Environment; (iii) Soybeans, UCS; (iv) Sustainable palm oil, Conservation International; pp. 14: (i) The state of the world's forests 2020, FAO; (ii) SDG 1, UN; (iii) Facts & Figures, UN Women; pp. 15: (i) Unpublished data.

Photos: Cover: Terraces formed after repeated earthquakes in Sichuan China. Liu Qiankun; pp. 3: Woman carrying vegetables in Yangole, DRC. Axel Fassio/CIFOR; pp. 6: Land restoration at Lake Chad Basin, Chad. TerrAfrica Partnership; pp. 7: Elephants grazing in peatlands at the Padang Sugihan Wildlife Reserve. Rifky/CIFOR; pp. 8: Aerial view of the Amazon rainforest, near Manaus, the capital of the Brazilian state of Amazonas. Neil Palmer/CIAT; pp. 9: Women harvest tea leaves in the Assam North East, India. Amit Ranjan/Unsplash; pp. 11: Wild meat is often sold in markets across the tropics, such as this one in Northern Ghana. Axel Fassio/CIFOR; pp. 12: Dozen of logs are transported to the next stop through Katingan River, Central Kalimantan. Sigit Deni Sasmito/CIFOR; pp. 13: Cocoa production in Cameroon. Ollivier Girard/CIFOR; pp. 14: Women carry firewood near the Gado-Badzéré refugee camp, Cameroon. Arnaud Chyngwa/CIFOR; pp. 15: Woman and child near the town of Sumbawa Besar on the Indonesian island of Sumbawa. Aulia Erlangga/CIFOR; pp. 16: People on rice terraces, Cambodia. Pixabay; pp. 17: A worker at the coffee nursery, Sokoru village, Ethiopia. Ollivier Girard/CIFOR; pp. 18: Benki Piyáko, an Indigenous leader from the Amazon, sang in his native language to close the two-day digital event on biodiversity and planetary health. Pilar Valbuena/GLF; pp. 19: Planting gnetum in Lekie, Centre Region, Cameroon.

Citation: CIFOR-ICRAF. 2021. CIFOR-ICRAF Annual Report 2020: Building forward better. Bogor, Indonesia: Center for International Forestry Research (CIFOR) and Nairobi, Kenya: World Agroforestry (ICRAF). 20 pp



RESEARCH
PROGRAM ON
Forests, Trees and
Agroforestry

FTA research is supported by the CGIAR
Trust Fund: cgiar.org/funders

