Climate change, energy and low-carbon development

Countries are exploring different ways to realize their Nationally Determined Contributions (NDCs) to the UN Climate Convention under the Paris Agreement. The Center for International Forestry Research (CIFOR) is supplying policymakers and practitioners in this field with the information, analysis and tools they need to design and implement sensible climate policies and practices.

Researchers at CIFOR are looking at the nexus between climate change mitigation and adaptation, bioenergy and low-carbon development.

Research priorities

Climate change mitigation

- **The Global Comparative Study (GCS) on REDD+**: CIFOR's hallmark global study on how to reduce emissions from deforestation and forest degradation continues until 2020.
- **Payment for Environmental Services (PES)**: CIFOR is studying how incentives to address environmental degradation work.
- **Sharing knowledge on REDD+ benefit sharing**: Scientists are analyzing benefit sharing mechanisms, risks and safeguards under REDD+, and have summarized the insights in an online knowledge tree that assists with decision making.
- **Mitigating emissions reductions**: CIFOR is examining ways to prevent greenhouse gas emissions from agriculture and from deforestation (e.g. through zero-deforestation value chains and private sector commitments) and a general trend towards low emissions development (Green Economy).
- **Forest restoration and climate change**: CIFOR is exploring the link between restoring degraded land and tackling climate change in order to build carbon stocks through global ecosystem restoration efforts.
- **SWAMP and Blue Carbon**: The Sustainable Wetlands Adaptation and Mitigation Project (SWAMP) works with 250 partners worldwide. It provides capacity development, engagement and research in 20 countries to protect Blue Carbon – the carbon stored in coastal ecosystems such as mangrove forests.

Climate change adaptation

- **Climate change adaptation**: Researchers are analyzing how people and forests adapt to climate change in Indonesia, Peru and Tajikistan by looking at how people migrate from forested areas and the effect of the remittances they send back to local communities.
- **Gender and climate change**: CIFOR provides insight and advice on locally specific solutions and gender perspectives, to allow people living in forests to cope with the risks posed by climate change.
- **Rehabilitating land in the Sahel**: Scientists working in West Africa are assessing different land rehabilitation initiatives – particularly for marginalized groups – in how they adapt to, and mitigate, climate change.

Bioenergy

- **Woodfuel and national climate change commitments**: CIFOR is looking into how woodfuel is addressed in sub-Saharan countries' NDCs to the Paris Agreement.
- **Integrating bioenergy and landscape restoration**: Researchers are exploring ways to grow trees for biofuel on otherwise unproductive land in Indonesia.
- **Bioenergy and ecosystem services**: CIFOR is assessing trade-offs, synergies and interactions of ecosystem services (carbon, water) under different management scenarios in biofuel plantations.

Performance assessment

- **Policy assessments**: CIFOR supports independent and transparent performance assessments of policies and interventions, such as a global study of REDD+ projects.
- **REDD+ baseline data**: CIFOR provides support to countries as they establish forest reference levels, assessing performance on climate change mitigation efforts.
- **Building capacity**: The team provides training on assessing mitigation efforts at the national level, as well as capacity-building workshops for farmers and technicians.

- **Software and online tools** (releasing new updates regularly): **CarboScen** is a simple tool to compute carbon stocks with stakeholders in different landscapes. **REDD+ Cost Model** is a budgeting tool that calculates and compares the costs of implementing subnational REDD+ initiatives. CIFOR is currently testing a new **Landscape Assessment Tool** in collaboration with partners under the leadership of the Governors' Climate and Forests Task Force.

Underlying forest and climate science

- **Uncovering climate, water, soils, forestry and biodiversity issues**: Research ensures that development and climate objectives are underpinned with the most up-to-date models and understanding, for example, studies of tree growth rings and work on carbon in peatlands and tropical forest soils.

The way we work

- **Triple E+ focus**: CIFOR concentrates on supporting *Effective*, *cost-Efficient* and *Equitable* climate change policies and practices, *plus* non-carbon benefits.
- **Cross-cutting**: Researchers and scientists work across disciplines to provide the best possible analysis, knowledge and tools for decision makers.

- **Capacity building**: CIFOR develops partnerships with agencies, programs and local governments to strengthen their ability to do their work. CIFOR also supports the university education of future leaders in developing countries.
- **Country focus**: Researchers rely on strong and reliable partnerships with Brazil, the Democratic Republic of the Congo, Ethiopia, Guyana, Indonesia, Mexico, Myanmar, Peru, Vietnam and many other countries.
- **Sustainable development**: Through this research, CIFOR supports the Paris Agreement and the Sustainable Development Goals, particularly Goal 7: Affordable and clean energy and Goal 13: Climate action. CIFOR also supports the CGIAR System-Level Outcomes to reduce poverty, improve food and nutrition security, and improve natural resources and ecosystem services.

Outreach

CIFOR's team is highly active at global climate events, coordinating side events and engaging partners in topics ranging from gender-responsive climate policy to managing risks in REDD+. Events include the UNFCCC's Conference of the Parties, the Asia-Pacific Forestry Week, the Asia-Pacific Rainforest Summit and the Global Landscapes Forum.

Story of change

Strengthening national forest strategies in Vietnam

The Vietnamese Government recently presented CIFOR with a merit medal to recognize its outstanding contribution to forestry development in Vietnam.

CIFOR works closely with the Ministry of Agriculture and Rural Development, as well as the Vietnam Administration of Forestry, on issues ranging from REDD+ to the national incentive scheme to protect forests (Payment for Forest Environmental Services, or PFES). As part of this robust partnership, CIFOR provides scientific evidence for policy makers and works with local and national authorities to

develop dialogue on key issues and pilot new concepts and approaches.

This research has influenced several national policies. For example, it has helped to improve the equity, effectiveness and efficiency of PFES by supporting the creation of new criteria and indicators on monitoring and evaluation. Also, the Ministry of Agriculture and Rural Development used CIFOR's findings as a basis for suggesting revisions to the national law on forest protection and development.

Project: Global Comparative Study on REDD+.
Country: Vietnam.
Read more: cifor.org/gcs