

Research at the heart of global issues

The future of tropical forests



Marshy clearing in northern Congo
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AGRICULTURAL RESEARCH
FOR DEVELOPMENT

The future of tropical forests

Preserving and promoting ecosystems for development

Forget the image of a virgin forest which must be protected at all costs, CIRAD's tropical forest research provides daily confirmation of the vital social, economic and ecological functions such ecosystems provide. In fact, the daily lives of almost a billion people depend on them.

A varied and interdisciplinary approach

CIRAD's research on tropical forests is varied and complementary, both in terms of the topics and disciplines concerned, and the geographical spread and kinds of work conducted. CIRAD's researchers work with all concerned parties, from smallholders, the private sector and local authorities through to international governance bodies. This global approach adds weight to their participation in major international debates.

Reconciling contradictory interests

Many different stakeholders are concerned with forests and they often have contradictory interests and views. CIRAD's research aims to reconcile the demands of human development and ecosystem conservation. Therefore it often acts as a mediator between different stakeholders. Its scientific programmes are always established in conjunction with its partners. This fundamental principle puts CIRAD at the heart of the issues facing its partner countries.



From natural forests to planted trees CIRAD's research at the heart of global issues

Balancing production and ecosystem conservation

There is growing demand for the goods and services stemming from tropical forest ecosystems. To meet this demand, CIRAD's researchers are working to improve concerted forest management methods, whether the forests in question are natural or planted.

- Sustainable management of natural forests
- Making use of a new type of ecosystem: degraded forests
- Promoting ecological intensification in planted forests
- Managing the interactions between forests and agriculture, organizing landscapes
- Developing agroforestry in agricultural areas

Promoting forest products to boost living standards in developing countries

CIRAD is working along several lines of research aimed at optimizing wood use. Researchers are also examining non-wood

forestry products, such as animal proteins, resins, fruit and latex etc., which can stimulate economic and social development for local people.

- Characterizing tropical woods and promoting little-used species
- Strengthening supply chains for non-wood products

Meeting local demand for renewable energy more effectively

Wood is a renewable energy source for the future and for every society worldwide, whether it be in the form of charcoal, biofuel or electricity generated from biomass. And wood is already the main energy resource in developing countries. Ensuring the sustainable local management of this supply chain to benefit local people is one of CIRAD's priority research lines.

- Improving fuelwood supplies to people in developing countries
- Optimizing and adapting conversion processes
- Developing the biofuels of the future

Issues

Boosting the services provided by forests to meet the challenges of climate change

In addition to the carbon sequestration (the capture and storage of carbon) offered by trees, forests provide a whole range of services that help to make local people less vulnerable to climate change. CIRAD is studying the vital role of forests in coping with one of the major challenges facing the planet this century.

- Devising ways in which societies and public policy can adapt
- Understanding and anticipating ecosystem dynamics in the light of climate change
- Quantifying carbon sequestration through forests, plantations and agroforestry systems more accurately, analysing the implementation of economic tools (REDD+, PES, CDM) and developing new, more effective and fairer tools

Makala project – Central Africa

Here the aim is to test different ways of ensuring sustainable fuelwood supplies to the 10 million inhabitants of the cities of Kinshasa and Kisangani while limiting the impact on forests (Europ Aid).

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Floresta Em Pé project – Brazil

In the heart of the Brazilian Amazon, this project is analysing the impact of logging on forest renewal and assessing partnerships between forestry firms and farming communities from a social and economic point of view (French Global Environment Facility, FFEM).

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CoForChange project – Congo Basin

How are the forests of the Congo Basin likely to evolve as a result of climate change and human pressure? The answers provided by this project should make it possible to improve the efficacy of public policy and biodiversity conservation programmes (ERA-Net BiodivERsA, French National Research Agency (ANR), Natural Environment Research Council (NERC).

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CoLUPSIA project – Indonesia

This project is working to limit deforestation by developing collaborative and fair natural resource use and management plans. This involves the institutional reorganization of land tenure issues and environmental policy (Europ Aid).

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PES-MIX project – Madagascar, Mexico

This project is assessing the efficacy and fairness of various payments for environmental services (PES) mechanisms and analysing their interactions with other tools for land management (French National Research Agency (ANR).

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Guyafor project – France, French Guiana

The aim is to build a network of permanent installations to measure, in particular, carbon sequestration by the forests of French Guiana. This will provide French Guiana and the surrounding region with a valuable tool for monitoring the forests and drive innovation in adapting to climate change and for regional development (State-Region Planning Contract).

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CAFNET project – Central America, East Africa, India

This project aims to promote coffee-based agroforestry systems by offering ways of assessing the ecosystem services provided and of promoting these services to benefit producers (Europ Aid).

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www.ifpindia.org/Managing-Biodiversity-in-Mountain-Landscapes.html

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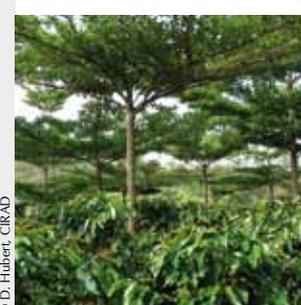
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Excellent and wide-ranging outputs

- > CIRAD's researchers publish in **reference journals** such as *Conservation Biology*, *Global Change Biology*, *Forest Ecology and Management*, *Annals of Forest Science*, *Tree Physiology and Fuel*.
- > CIRAD is conducting a **foresight study** on the forests of Central Africa in 2040, with support from the Futuribles group.
- > CIRAD's researchers regularly head sessions at major **world conferences** such as the International Union of Forest Research Organizations (IUFRO) in Seoul in 2010, the 8th World Forest Congress in Buenos Aires in 2009, and the 2nd World Congress of Agroforestry in Nairobi the same year.
- > CIRAD is a member of **global expert groups** on major planted species such as eucalyptus and teak.
- > CIRAD regularly publishes **policy briefs** aimed at fuelling international debates such as REDD+ and payments for environmental services.
- > CIRAD is a **leader** in the field of low-impact logging.
- > It has unique **experience** in characterizing tropical wood.
- > CIRAD works in **partnership** with many international research centres, such as the International Union of Forest Research Organizations (IUFRO), the Centre for International Forestry Research (CIFOR) and the World Agroforestry Centre (ICRAF) etc.
- > Its researchers regularly publish **reference works** such as *Trees, Shrubs and Lianas of West African Dry Zones* (Michel Arbonnier, MNHN-Quae co-publication, 2009), *Manuel de référence pour l'installation de dispositifs permanents en forêt de production dans le Bassin du Congo* (Nicolas Picard and Sylvie Gourlet-Fleury, COMIFAC, MAE), and *Utilisation des bois de Guyane dans la construction* (Michel Vernay and Sylvie Mouras, Quae, 2009).
- > CIRAD publishes *Bois et Forêts des Tropiques*, a **scientific and technical journal** referenced in the *Web of Knowledge* (<http://bft.cirad.fr/>).

CIRAD's tropical forest research in numbers:

More than **50 years'** experience

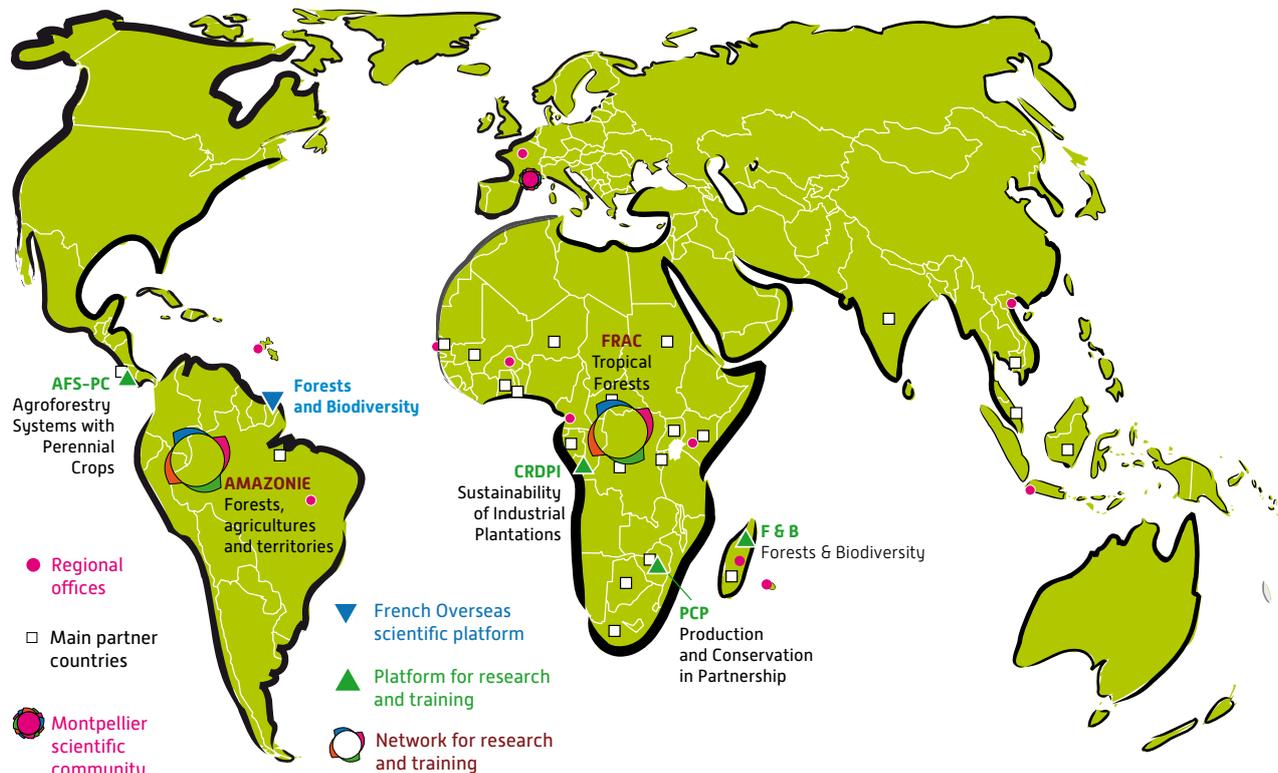
Almost **150** researchers

13 research units

Staff members in more than **50 countries**, including the world's three main tropical forest basins

More than **100 forest projects** currently underway

Partners and projects



Contacts

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