

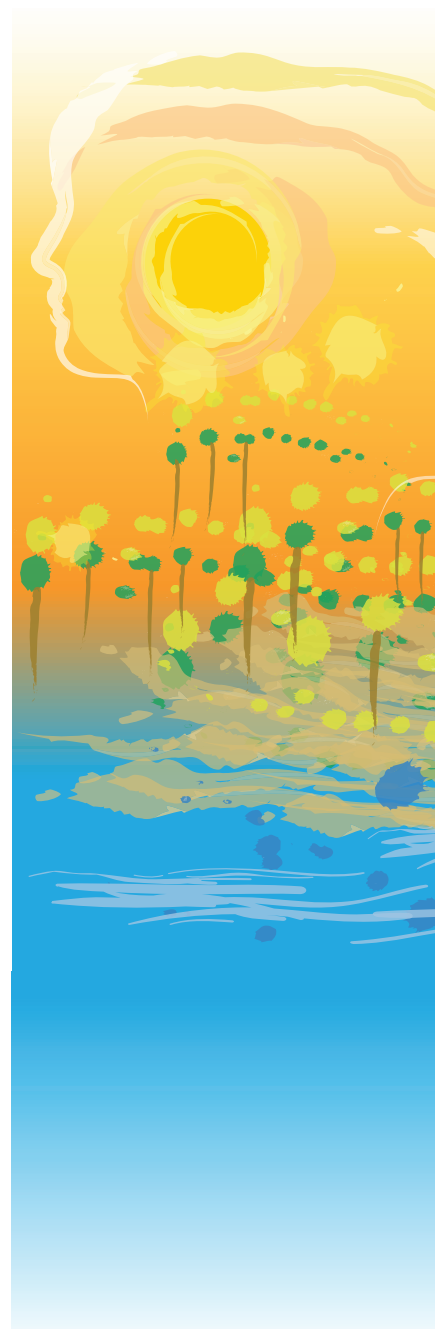
CATIE and climate change...

Considering that:

- Climate variability and unpredictability of onset and duration of dry and wet seasons is increasingly and more intensively causing damage to people, agriculture and infrastructure in Latin America and the Caribbean.
 - Climate change threatens to strengthen the effects of climate variability, at the same time, changing growing conditions for crops and forest species. While some of these effects may be positive, many more will be negative in the short, medium and long term.
 - The overall impact of climate change and climate variability is strongly related to the degree of application of responsible land use practices.
 - Dry areas, coastal zones and mountainous areas will be most affected by climate change, as will the hurricane susceptible countries of the Caribbean and Central America.
- **Water availability** for irrigation, consumption and electricity generation will be a major concern in most countries of Latin America and the Caribbean.
 - **Food security** already is of great concern in some countries, in particular in Haiti, Bolivia, Guatemala, Honduras and Nicaragua; and will become more so due to the direct and indirect effects of climate change.
 - Due to changes in availability of hydrological resources and food, combined with increased areas suitable for major disease vectors, the **effects of climate change on health** are also of major concern throughout the region.
- In many cases, **social networks and good governance mechanisms** have served as safety nets for people struck by extreme weather conditions (e.g. hurricanes, floods, droughts) and other extreme events (e.g. earthquakes).
 - **Information and efficient communication** mechanisms have greatly contributed to the capacity of people to react to environmental, climatic, economic and political changes.
- Urgent action is required to increase our resilience to climate variability and extreme events.
 - A better understanding of individuals' responses to extreme climatic events is fundamental for the design of adaptation strategies in developing countries.
 - Biodiversity and related ecosystem services have an important role in increasing social and environmental resilience of human and natural systems to the potentially negative effects of climatic, environmental, economic and political changes, in particular for rural and sub-urban poor.

CATIE works with many partners on increasing social and environmental resilience to climate change and variability, as well as towards optimum use of the opportunities that climate change and related international policies will create (e.g. mitigation). It does so through the implementation of interdisciplinary long and medium-term programs that focus on linking local to national and international initiatives; strengthening local livelihoods through sustainable territorial resource management and best agricultural practices; strengthening the local participation in important value chains; and linking applied research to education, training and implementation.

www.catie.ac.cr/cambioclimatico



CATIE works with partners in climate change and environmental services...

In Central America

Tropical Forests and Climate Change Adaptation (TroFCCA)

The project studies the impact of climate change on hydrological services and biomass, and the development and validation of participatory land use-hydrological services scenarios to formulate adaptation strategies. It works on analysis regarding decision-processes and policy networks across scales for ecosystem-based adaptation, risk perceptions of, attitudes and behavior towards climate change and land degradation, and water conflict prevention in areas vulnerable to climate change.

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Environment for Development-Central America (EfD-CA), GSEBSA

The initiative conducts research on how Costa Rican coffee farmers react to different levels of risk of losing income and productive means due to adverse weather under measurable and immeasurable uncertainty. It explores the potential of safety nets (created by the government, communities, organized groups or families) as an adaptation to climate change strategy in Central America.

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Various countries in Latin America and the Caribbean

MIA/FORMA

The project applies research into impacts of climate change on forest and agroforest species and their resilience to projected changes, and strengthens local capacities for participation in international mitigation strategies (MDL, REDD+).

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Degraded Pastures

It is working on carbon sequestration, CH₄ emission reduction, increased production and biodiversity conservation through improved pasture systems in Colombia, Costa Rica and Nicaragua.

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CLIMIFORAD

It is a network of permanent sample plots in montane forest areas subject to climate change; includes development of measurement protocols.

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REDD+ related projects

This includes case studies of good governance for REDD+ in REDD-net project; training for medium level decision-makers and technicians; training for indigenous people and rural communities, and technical assistance in project development.

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Within the Mesoamerican Agroenvironmental Program (MAP)

FOCUENCAS

It strengthens social networks and local governance, particularly in relation to landscape management for the provision of hydrological services.

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Central American Cacao Project (PCC)

It works in the validation and dissemination of vegetative propagation methods for improved cacao cultivars, in addition to a baseline data on carbon stock, herpafauna diversity, soil macrofauna, pollination and production for monitoring of changes in essential components of the cacao AF-system. It studies the contribution of AF-systems with cacao to biodiversity conservation and hydrological services regulation.

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Innovations in Coffee and Horticulture

The project aims at improving livelihoods through sustainable coffee and horticultural production; analysis of impacts of climate change on coffee production areas and coffee production.

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FINNFOR

It is working on removing socioeconomic, political and technical barriers for responsible forest management in key territories and pilot areas in Central America; strengthening social and environmental resilience to climate change of forest people; and preparing communities and countries for implementation of REDD+.

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