

# Building climate-smart territories for environmental and food security



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Annual Report 2011

The Tropical Agricultural Research and Higher Education Center (CATIE) is a regional center dedicated to research and graduate education in agriculture, and the management, conservation and sustainable use of natural resources. Its members include the Inter-American Institute for Cooperation on Agriculture (IICA), Belize, Bolivia, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Venezuela, Spain and the State of Acre in Brazil.

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ISSN 1659-0597

630.72

T856 Tropical Agricultural Research and Higher Education Center  
2011 Building climate-smart territories for environmental and food security :  
annual report 2011 / Tropical Agricultural Research and Higher Education  
Center. – Turrialba, C.R : CATIE, 2011.  
34 p. : il. – ((Institutional series. Annual report / CATIE ; no.32)

ISSN 1659-0597

1.CATIE – Informes anuales I. Título II. Serie.

#### Credits

Production: Communications and Policy Office

Texts: Adriana Sánchez, Juan Carlos Peña

Design and layout: Silvia Francis

Photos: CATIE

Translation: Christina Feeny



Solutions for environment and development  
Soluciones para el ambiente y desarrollo

Headquarters, CATIE 7170

Turrialba 30501, Costa Rica

Tel. + (506) 2558-2000 • Fax: + (506) 2558-2060

[www.catie.ac.cr](http://www.catie.ac.cr)

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# Our mission, vision and strategy



## Our Mission

Increase human well-being and reduce rural poverty through education, research and technical cooperation, promoting sustainable agriculture and natural resource management.

## Our Vision

Territories and rural communities in Latin America and the Caribbean achieve greater human development by providing ecosystem goods and services in a competitive and sustainable manner.

## Our Strategy Statement

To be a recognized leader in the development of system and collaborative approaches that facilitate innovative and sustainable solutions to the complex challenges facing agriculture and natural resource management in Latin America and the Caribbean.

## The future is in our hands

The world was undoubtedly changing, and at a tremendous speed. The global economic and financial outlook went from a bonanza built on shaky foundations to a sudden downward spiral filled with uncertainty and anxiety. And all this happened in just four years.

CATIE was also changing. When I became Director General, in 2008, we embarked on a comprehensive process of institutional change, implemented at many levels and with a single purpose in mind: to take control of CATIE's future based on our present.

While the world struggled to halt the collapse and tried to catch its breath, each member of CATIE pondered the fundamental questions, considering these in the light of our strategy statement and our renewed mission and vision. Our goal was clear: we wished to lay the foundations for a CATIE that would be a *“recognized leader in the development of systems and collaborative approaches that facilitate innovative and sustainable solutions to the complex challenges facing agriculture and natural resources in Latin America and the Caribbean.”*

This intense work produced results. Based on a clear, shared strategy and on a well-defined niche, we took on our role as leaders in systems and collaborative approaches. This is where we stand out, this is where we add value and make the biggest difference, through an integrated and integrating approach.

A requirement to achieve this objective was to immerse ourselves in an enriching and collective work process, combining actions, disciplines, approaches, work groups ...these were the dynamics through which we responded to this great challenge. This effort has given rise to a diverse CATIE (therein lies its wealth), but also an integrated CATIE (therein lies its power). The Mesoamerican Agroenvironmental Program (MAP) was undoubtedly a great training opportunity that allowed us to discover the true potential of our Institution.

During these years we took firm steps to move from financial dependence to the generation of our own financial resources. The creativity that has been awakened as a result of this necessity has been impressive, and is expressed in numerous ideas for new business ventures, new spheres of action, scientific and academic programs, and technical and productive cooperation activities. Our clear and shared strategy, our distinctive niche and the integration process have all yielded their fruits.



*“In 2011, based on a clear, shared strategy and on a well-defined niche, we took on our role as leaders in systems and collaborative approaches. This is where we stand out, this is where we add value and make the biggest difference, through an integrated and integrating approach.”*




So, where do we go from here? We have promoted the paradigm of integrating three approaches: territorial, value chains and livelihoods, as sure pathways to sustainable development and the reduction of rural poverty. We will complete our vision by incorporating cross-cutting issues of food security and response to climate change, aspects on which we have worked to develop a very ambitious concept of “climate-smart territories.” This concept is based on encouraging integrated approaches to land use that reduce emissions and are more adaptable to the pressures of climate change and variability, in order to ensure sustainable livelihoods and ecosystems. For this we need to develop technologies, policies and institutions that enable a favorable environment for collective action.

We have the tools that can provide these territories with effective mechanisms for decision-making, participatory governance and conflict resolution. These tools will also allow them to mitigate the effects of climate change, making them more resilient to this global change through improved food security and the provision of ecosystem services. Therefore, in the coming years, I hope to see this idea flourishing in several territories within our area of influence and, at the same time, to take these experiences to other regions through south-south cooperation initiatives.

Our future will also be shaped by our Graduate School, an international university renowned for its systems approaches and recognized as a global leader in this methodology, working in close collaboration with top-level research centers and universities around the world.

Finally, the CATIE of the coming years will rely largely on its own talent to generate the financial resources needed to operate and grow, with a key share of its capital coming from our own region. We have the talent and the human capital to accomplish these goals. Given our strengths, we will succeed. Although the present conditions are challenging, we see these difficulties as an opportunity to consolidate our leadership and thereby contribute more effectively to the societies of our member countries. The future is in our hands.

  
Dr. José Joaquín Campos Arce  
Director General CATIE

## Executive Summary

**Cooperation for rural development.** During 2011, CATIE consolidated the positive impact of its work with the aim of improving the living standards of tens of thousands of families throughout the Americas. This effort, articulated through the Mesoamerican Agroenvironmental Program, benefited at least 30,000 households, bringing us closer to our goal of increasing the number of rural families benefited from CATIE's numerous products and services, provided in cooperation with its partners.

**Participatory approaches.** Through technical cooperation - one of our institution's vital areas of action - we provided support to more than 3,500 producers in Mexico, El Salvador and Nicaragua, in areas such as the production of vegetables, coffee and cacao. During this period, the field schools (FS) had a major impact on family dynamics, particularly in terms of promoting changes in the traditional roles of women and young people in production processes, based on the application of highly participatory approaches.

These initiatives were implemented under an integrated and comprehensive system which, in the Trifinio region alone and in the year reported, made it possible for five of our programs and three National Technical Offices (NTOs) to unite their efforts and policies in adjacent municipalities of Honduras, Guatemala and El Salvador. This model was used to implement projects related to livestock production and forest resources.

**Partners network.** The impact of our actions was further enhanced through our extensive network of partners from different sectors and its active participation in the design of policies on rural development, agro-environmental development and climate change. We also take advantage of this network as a vehicle for transferring technologies for sustainable land management developed at CATIE. This way of working has enabled us to leverage financial resources and ensure that the results and impacts of our interventions are enduring.

**We keep presence in our member countries.** During 2011, CATIE's National Technical Offices (NTOs) in the countries played a crucial role in influencing policymaking processes by organizing dozens of activities on issues such as sustainable livestock production, forest governance, watershed management, agricultural research, family agriculture, protected areas, water resources, climate change and climate vulnerability, environment and gender. Undoubtedly, those responsible for policymaking on agriculture, production and governance in the member countries regard the NTOs as extremely valuable strategic partners, for example, in the development of specific regulations or standards on forest management in El Salvador and Honduras, the beef sector in







Guatemala and watershed management, to mention just a few examples benefited from CATIE's.

This intensive work was accompanied by numerous efforts to increase CATIE's presence in the media. The production of information materials and their dissemination to a large network of journalists enabled us to triple the number of press reports published in 2011.

**Climate-smart territories.** In 2011, CATIE systematized the concept of "climate-smart territories," an innovative approach designed to address the current challenges of climate change, food security, poverty and environmental degradation. It is based on integrating our system and collaborative approaches with our interventions at the local and national levels.

The Cooperative Program on Mitigation and Adaptation to Climate Change in Sustainable Forest Management in Ibero-America (MIA) is a joint initiative by a group of institutions (including CATIE) interested in generating information and knowledge and building capacity in the Ibero-American countries in the area of mitigation and adaptation to climate change in sustainable forest management. In relation to cacao production, in 2011 CATIE organized national cacao forums in five countries: Panama, Costa Rica, Nicaragua, Honduras, and Guatemala, which resulted in the forging of many partnerships, the facilitation of technical assistance and spaces for discussion and consensus-building.

**Education.** In 2011, CATIE launched a new program in response to the urgent demand for distance training. Two international distance courses -virtual and online - were imparted to over 100 participants. In addition, the students of the Specialization and Master's program in Development Practice now take all their courses using the *moodle* platform as a virtual classroom. Distance training will be a work priority for the Education Division in 2012.

This year CATIE also accomplished its goal of ensuring that over 50% of its students' degree theses incorporate system and inter-sectoral approaches. The institution implemented a busy agenda of training events that benefited more than 1,000 people.

**Integration as a starting point.** In 2011 closer ties were forged between CATIE's various programs in order to create a unique product (system approaches) that distinguishes our institution's approach to knowledge generation and applied science. Biophysical and socioeconomic approaches, coupled with a strong interdisciplinary modeling component, were all combined in a "crucible" that included many of our programs such as Livestock Production and Environmental Management, Climate Change, Value Chains and Governance programs and the Scientific Partnership Platform (PCP), among others.

**Strengthening our capabilities.** In 2011, with a clear and specific commitment to develop an increasingly well-qualified staff, CATIE launched its Continuous Training Program, for the purpose of strengthening the capabilities of the institution's staff, both at headquarters and in the country offices, and promoting their professional and personal growth. This initiative seeks to improve our staff's skills to help them achieve their goals, create a culture of continuous learning throughout the organization and contribute to personal development as the institution's legacy to its employees. During this period CATIE also continued its efforts to provide competitive salaries for its personnel and forged numerous alliances to provide in-service training.

During 2011, CATIE modernized its communications system by implementing Lync, a new and modern unified communications platform that includes email, chat, telephone and videoconference services and many other tools. This will make it easier to work together in pursuit of our vision, but this time using the latest technology. Lync is perhaps the most advanced collaborative work tool available on the world market.





This year, CATIE benefited from a robust capital investment, aimed at strengthening the Farm enterprises, in order to provide resources for the Core Budget and continue our initiatives of research and development. The dairy activities deserve special mention given that, thanks to the injection of capital and CATIE's scientific expertise, the dairy has become a model of sustainable agricultural production.

**We broaden our outreach offer.** The Opportunities Management and Technical Services Unit (TSU) has become a flexible corporate mechanism through which CATIE responds to the technical needs of its partner institutions and organizations, and promotes its technological and methodological services. The TSU also facilitates the activities of CATIE's different units and has developed internal standards and regulations that seek, on the one hand, to harness financial resources to strengthen the institution's core functions and, on the other, to influence local, national and regional development processes.

**Donors and member countries.** In 2011, CATIE effectively negotiated the quota contributions from its member countries, strengthened its ties with Germany as a strategic donor and increased its presence in the Acre region of Brazil. CATIE also consolidated its work with CIRAD, CIFOR, Bioversity, CABI and other global organizations such as IUFRO, and worked on the implementation of the new "CGIAR Research Programmes" (CRP) with a view to being recognized as a strategic partner of CGIAR in Central America.

Furthermore, in July 2011, CATIE signed an inter-institutional bilateral cooperation agreement with IICA to facilitate joint work on several initiatives related to cacao and climate change.

## We are an inter-American organization

We are currently implementing more than **100 projects** throughout Latin America and the Caribbean, with offices and personnel based in different countries of the region.

We have National Technical Offices (NTOs) in Guatemala, El Salvador, Honduras, Mexico, Nicaragua, Panama, Costa Rica, Bolivia, Brazil, Belize and the Dominican Republic, as well as institutional links with Paraguay.

In 2011, our offices in Mexico were formally opened. Initiatives are also under way in Venezuela, Colombia, Argentina, Chile, Peru and Haiti. In addition, our educational courses cover the entire continent.

At CATIE we are clear about what is most important for us: the rural families of Latin America and the Caribbean. They are the ones to whom we dedicate our best efforts, working with them and for them each year in order to promote a type of development based on productive, equitable, competitive and sustainable territories. We achieve this goal through a **unique work strategy** that combines research, education and technical cooperation, in partnership with an extensive network of allies, using advocacy and communications strategies to extend our reach and benefit more and more families.

In this report we wish to share with you the arduous work carried out during the past year in pursuit of our goals.

CATIE seeks to alleviate poverty and bring hope to millions of people, the human faces of Latin America and of the world.





*"Through training we learned that we can produce other crops in our coffee plantations, such as foliage plants, anthuriums, cinnamon and lemons. This helps us to earn more income for our families. The training courses we received have been very useful for us women," Florida Díaz Santizo and Terfora Santizo Perez, Nuevo Llano Grande Palestina, Mapastepec, Soconusco region, Chiapas, Mexico.*

## MAP: A tree with deep roots

In 2011, through the Mesoamerican Agro-environmental Program (MAP)—a strategic regional initiative—our institution benefited more than 30,000 families who participated actively in initiatives managed directly by CATIE or by its partners. The beneficiaries included family-based producers' organizations (associations and cooperatives) and service providers (technical, business and financial), as well as educational, governmental and non-governmental organizations, among many others.

The many facets of the MAP have had a deep impact on its beneficiaries, largely through the use of so-called "participatory methods, and particularly through the mechanism of field schools (FS). Examples of these techniques and methods may be seen in the projects implemented by CATIE with its partners in Chiapas, Mexico, where field schools are used to provide crucial training and technical assistance to rural communities and villages, predominantly with indigenous populations, in the context of the Integrated Social and Sustainable Development Project (PRODESIS). In 2011, CATIE supported the National Coffee Commission (COMCAFE) of the State of Chiapas in efforts to diversify the State's coffee growing areas; we also worked with 300 coffee producers and trained 172 women heads of households in the production of edible mushrooms, vegetables and ornamental plants.

### Accompaniment for progress

Technical cooperation is the mechanism that enables CATIE to promote policy processes for development, through its presence in the territories where the target populations are based. In this way, CATIE strengthens its links with local institutions and organizations, implementing national projects financed with local and international cooperation resources, through its NTOs.

Furthermore, the numerous technical assistance and training services provided enable professionals and farmers to apply the knowledge generated through research processes carried out by CATIE's programs, projects and students. The practical results of this effort are evident in many countries such as Mexico, where 300 coffee producers benefit from the actions of the Diversification of Coffee Plantations Project, or in Nicaragua where 272 families grow improved cacao crops, or in the cross-border area between Honduras, Guatemala and El Salvador, known as the Trifinio Region, where thousands of families are participating in a wide range of programs in areas such as competitiveness, value chains, climate change, livestock and watersheds, among others.

### Summary of benefits

The impact of CATIE's strategic program on the living conditions of tens of thousands of people in Mesoamerica has been more than significant. Below we include some figures that attest to this fact and specify key institutions and strategic partners that have benefited from the MAP:

- Over 80 cooperatives or associations of farming families and their service providers (ACAWAS and CACAONICA in Nicaragua; APROCACAHO, CENOC and COPRAUL in Honduras; APPTA and ACOMUITA in Costa Rica; ASECAN, Chorti Fresca and ASORECH in Guatemala; COCABO in Panama; and ACGPO and ACAMSERTA in El Salvador).
- More than 80 local (territorial) organizations (platforms, local groups, municipalities, community associations and educational organizations such as the Ministry of Education of Waslala, Nicaragua, the Technical Platform in Bocas del Toro, Panama, the Natural Resources Association of Southern Petén, Guatemala and the local forestry councils of Costa Rica).
- At least 50 national-level governmental, non-governmental and educational organizations (Ministry of Environment and Natural Resources of El Salvador, Honduran Coffee Institute, Ministry of Agriculture and Livestock of Costa Rica and the National Commission for Protected Natural Areas of Mexico).
- At regional level, CATIE contributed to the development of at least eight strategies, particularly the Central American Strategy for Rural Area-based Development (ECADERT for its Spanish acronym) and the Regional Climate Change Strategy—ERCC (for its Spanish acronym). It also supported the Central American Learning Alliance (AdA), the Trinational Commission of the Trifinio Plan, and the Regional Agro-environmental and Health Strategy—ERAS.



*"In the field schools (FS) we sit under a tree receiving classes and we also visit other farms to look at their experiences with our own eyes, and then, as we work on our own farms, we gradually gain experience. We follow up on our work in the field school because it helps us to get ahead, and lifts us out of poverty, and because we gradually improve our production systems," Enrique Casco, farmer from La Pita del Carmen, Nicaragua.*

## Influencing change

In all its actions, CATIE's seeks to influence policy, provide accompaniment, offer proposals and suggest alternatives, so that the knowledge it generates can be applied in a more comprehensive and specific way.

In 2011, this key concept permeated all of CATIE's work. With support from our research programs, our institution participated in approximately 80 different policy initiatives with national partners and decision-makers. The agenda was dominated by topics such as sustainable livestock production, forest governance, watershed management, agricultural research, family agriculture, protected areas, water resources, climate change and vulnerability, environment and gender. Equally important were the issues related to the International Year of Forests in Guatemala; environmentally sustainable livestock production, forestry and rural development in Nicaragua; forestry policy in El Salvador; watersheds in Honduras; and the coffee sector in Mexico.

Throughout the Americas, CATIE's efforts sought to contribute to rural development through its unique system and collaborative approaches.

A vital part of that task involved the implementation of a communications strategy which included actions in media management, outreach events, institutional media and internal communications. The results of this effort were immediate, and were reflected in more than 370 press reports or mentions of CATIE in leading Costa Rican, Latin American, US and European printed media, together with additional reports on television and radio, which carried our message to a broader audience.

Our influence was also felt in top-level forums. In Panama, CATIE participated actively in the International HELP Symposium, while in Costa Rica efforts focused on the eighth Latin American Congress on Forest and Environmental Law, entitled "*Forests, Governance and Forest Law: forest legislation for people*," the International Teak Conference, the National Forestry Fair "*Vive la madera and la c-neutralidad*" and our own International Fair under the slogan "The forest needs you, you need it more." We also played a distinguished role at the Environment Day Fair, where our Director General transmitted our message to hundreds of Costa Ricans in his keynote address delivered at the inaugural event, held in the Melico Salazar Theater,

CATIE organizes annual National Cacao Forums in the six countries where it supports the cacao sector through the Central American Cacao Project (an integral part of the MAP). In 2011, national



*"With the RET-CATIE synergy, we are consolidating the actions of the Chiapas network and are very pleased with the support we have received for the joint production of policy briefs for decision-makers on issues of interest for the State of Chiapas,"*  
*Dr. Carlos Tejeda- coordinator of the Network of Tropical Ecosystems of Chiapas, Mexico.*

forums took place in five countries: Panama, Costa Rica, Nicaragua, Honduras and Guatemala. These meetings helped to launch important partnerships and encouraged the governments to strengthen the cacao sector. Since 2008, more than 100 people from 30 different cacao organizations have participated in each event.

CATIE also participated in other important regional activities, such as the meetings of the Central American Integration System for Agricultural Technology (SICTA) and the Central American Strategy for Rural Area-based Development (ECADERT, for its Spanish acronym).



### Coffee with a sustainable aroma

As the traditional motor of many Latin American economies, coffee is once again flourishing thanks to efforts to promote an integrated Agroforestry concept, capable of generating additional income for farmers through carbon sequestration. CATIE, together with several public and private organizations of the Costa Rican coffee sector, is promoting an agreement for the payment of environmental services (PES) to coffee plantations with agroforestry systems.

Research conducted by several institutions has determined that this crop, especially in plantations with trees, plays a major role in capturing carbon dioxide (CO<sub>2</sub>). For its part, the PES system provides income for those who conserve private forests and is considered to be one of the main factors that have enabled Costa Rica to reduce its deforestation rate and restore its forest cover.

Although a PES scheme has existed since 2003 for systems that combine forest and agricultural crops, this only contemplates new trees. The idea is to extend the agreement to include not only new trees, but also those already established on farms.

Agroforestry systems in coffee plantations have great potential for short and medium-term carbon sequestration, equivalent to the results obtained in some secondary forests. These systems also encourage greater biodiversity and water recharge, protect the soil and create a better microclimate.

In Costa Rica, the PES could mitigate the loss of coffee growing areas, which are decreasing at an annual rate of 3,898 hectares. Out of the 23,386 hectares of coffee plantations that were eliminated, an estimated 17,539 hectares were coffee plantations associated with trees.







*"We are grateful to CATIE for the unique support they have given us and we are aware that CATIE's vision is very different to that of any other donor. They have taught us that it is not just a matter of spending money, but rather of building capacity and creating processes within institutions or organizations. Because that is what guarantees follow-up, and we have learned how to take advantage this. We are cultivating what still remains of the seed that CATIE planted, trying to ensure that when MesoTerre and Finnfor are no longer here, we can continue to provide follow-up and support to farmers," Marco Torres, technician MesoTerre project, MAP.*

### Mitigation and adaptation to climate change

The Cooperative Project for Mitigation and Adaptation to Climate Change in Sustainable Forest Management in Ibero-America (MIA Project) is an initiative of a group of interested institutions, including CATIE. The project aims to generate information and knowledge and strengthen regional capabilities for mitigation and adaptation to climate change through sustainable forest management.

With this in mind, in 2009, the MIA established an international network of permanent parcels through the project entitled "Monitoring the Impact of Climate Change in Permanent Parcel Networks in Tropical Rainforests of Mesoamerica" (REMOCCME), implemented until mid-2011 through an existing network of permanent parcels designated for long-term research in natural forests of Costa Rica, Guatemala and Nicaragua.

This project to promote adaptation to climate change was coordinated by CATIE in conjunction with the National University of Costa Rica (UNA), and resulted in criteria for the establishment of networks for monitoring the impacts of climate change on Mesoamerican forests.

The MIA project also organized a workshop to facilitate closer contacts between journalists and researchers. This workshop took place on August 1-5, 2011 at CATIE headquarters, and was attended by technicians, researchers and journalists from several Latin American countries. The meeting with journalists working for media organizations in countries such as Colombia, Peru, Chile, Costa Rica, Panama and Guatemala was organized to promote a mutual understanding of the work carried out and provide training to journalists on issues related to climate change. This consortium of institutions included CATIE, the International Center for Forest Research (CIFOR), the INIA of Spain, the Universidad Politécnica of Madrid (UPM), Spain, and the research centers of the INIA system in Ibero-America.

## Strategic leaders for the future

The men and women that graduate from our Graduate School are professionals capable of teaching, providing technical cooperation and undertaking scientific research applied to the needs and realities of the peoples and countries of Latin America.

The class of 2010-2011 consisted of 56 students, all of whom acquired skills and knowledge to address complex problems affecting the agricultural sector of their respective countries based on the application of system approaches in their daily work.

During 2011, we made good progress in achieving our target of ensuring that over 50% of our students' thesis studies incorporate system or intersectoral approaches. Of the 64 theses published, 37% included system approaches, 15% included both system and intersectoral approaches, while 15% included intersectoral approaches. In other words, 52% of the theses submitted incorporated integrated approaches.

### Without physical barriers

In our increasingly globalized world, modern education is moving beyond the classroom and is extending into the digital realm. Thanks to an almost omnipresent Internet connection, students can be integrated wherever they may be, creating virtual classrooms without physical barriers.

At CATIE we are working hard to respond to the new conditions of the educational context in order to cater to the needs of our future professionals. In 2011 we imparted our first two international distance courses (virtual and online) to more than 100 participants. In addition, students of the Specialization and Masters in Development Practice now take all their courses using the *moodle* platform as a virtual classroom. In 2012 distance training will be a work priority for the Education Division.





## Our academic services

CATIE's Graduate School is the oldest higher education center specializing in agriculture, natural resource management and conservation in Latin America and the Caribbean. Our goal in 2011 was to train leaders capable of successfully carrying out their professional work in difficult and changing environments, with a keen awareness of their social responsibility.

Our academic programs are internationally recognized for their high standards and quality. We offer five Master of Science programs in the areas of Ecological Agriculture, Tropical Agroforestry, Management and Conservation of Tropical Forests and biodiversity, Integrated Watershed Management and Environmental Socioeconomics, as well as various Doctorate programs with the University of Idaho in the USA and the University of Bangor in the United Kingdom. We also offer three professional Master's programs with institutions of international renown:

- International Agribusiness Management (joint degree with INCAE Business School)
- Master's in Development Practice (part of the Development Practice Global Network)
- Master's Program in International Sustainable Tourism (with the University of North Texas)

In February 2011, Costa Rica hosted the third annual meeting of the Global Network of Master's Programs in Development Practice (MDP), which was held on the CATIE campus. The network is made up of 23 leading universities from around the world, including CATIE, which impart MDP programs and meet once a year to discuss the progress and quality of the programs.

This year delegates discussed issues such as the curriculum of each program affiliated to the network, direct practice in the field, a common course called "the global classroom," the operation and financing of the network, the graduates and the monitoring and evaluation system.

## Integration: internally and externally

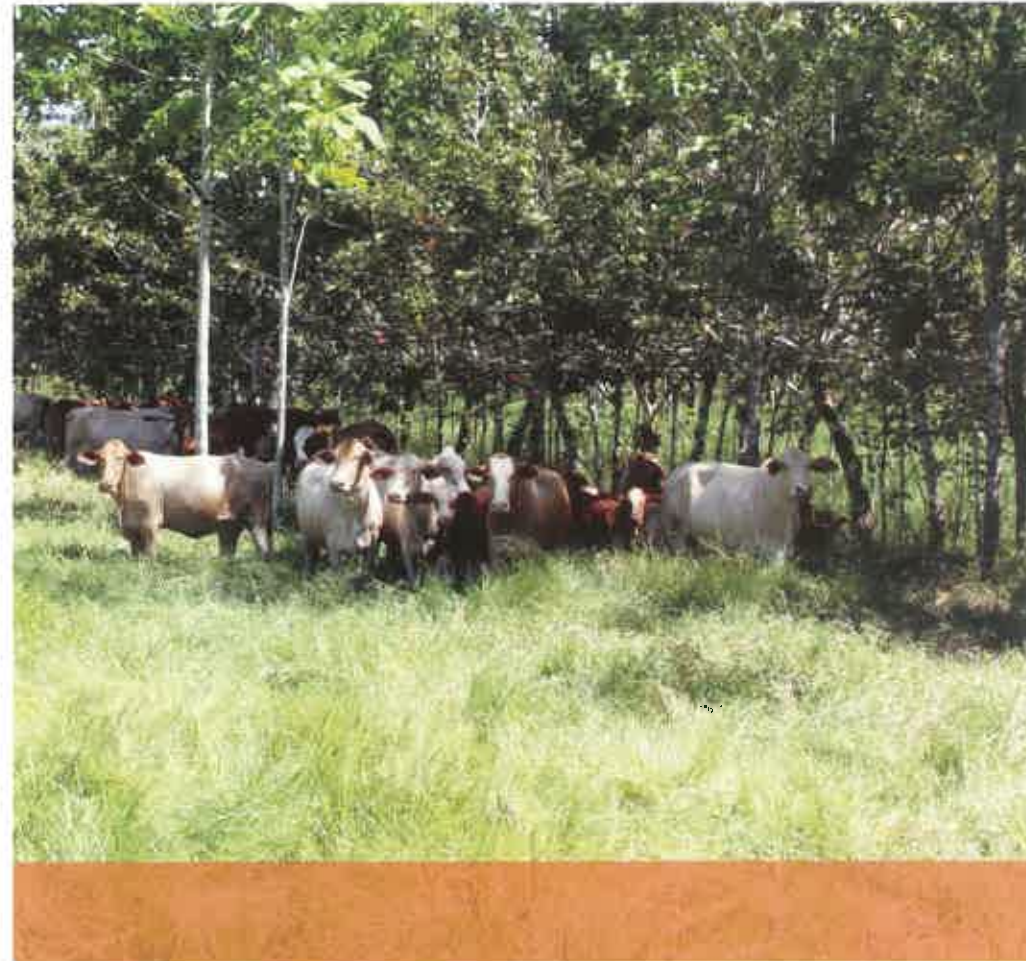
CATIE is a unique center specialized in finding solutions to address the complexity of current problems affecting agriculture and natural resources in Latin America and the Caribbean. This arduous task can only be accomplished through the development and application of system approaches, in close cooperation with partners and allies at all levels.

### Integrated research

All research work undertaken by CATIE has a system base. Initiatives such as the Agroforestry and Sustainable Agriculture Program are enriched with contributions from the Research on Development, Economics and Environment Program (IDEA) and of the Production and Conservation in Forests Program.

For its part, the work of the Agroforestry and Sustainable Agriculture Program intersects with the Competitiveness and Value Chains Program, while the Climate Change and Watersheds Program has links with the rest of the programs. By addressing complex problems in an integrated manner we encourage a comprehensive perspective and, therefore, we facilitate solutions with many different variables, angles and actors.

There were many examples of this approach during 2011. Research carried out by CATIE, CIRAD and the University of Idaho, shows how Agroforestry systems (for example, multi-strata living fences) can provide bridges for forest-dependent birds, thereby reducing the impact of fragmentation for bird populations of interest for conservation. Furthermore, it was shown that combining coffee plantations with forests limits the spread of coffee-bean borer pest (*Hypothenemus hampei*).





Both inputs confirm that conservation and production must go hand in hand for the future of our societies, and both combine the knowledge and contributions of many programs and disciplines applied at CATIE.

### **Integrated cooperation**

CATIE's goal in 2011 was to secure 60% of its project funding through integrated programs. Thanks to initiatives such as the Scientific Partnership Platform and the Mesoamerican Agro-environmental Program (MAP), it accomplished that objective.

In the case of the MAP, this involves 22 units, numerous countries and diverse topics such as sustainable management of agriculture and natural resources, poverty reduction and gender equity.

The Scientific Partnership Platform (PCP) formed with CIRAD, Bioversity, INCAE, PROMECAFE and CABI continues to be the other bastion of integration. In 2011 this initiative was endowed with additional resources and human talent to continue with its innovative work.

In 2011, CATIE also submitted a concept proposal for the establishment of a forest platform, based on the PCP experience — a type of PCP for “Sustainable use and conservation of forests” - to several potential partners. We hope that in our next Annual Report we will be able to confirm that this effort has yielded results

## People in constant growth

### Internal initiatives

An integrated management that guides and enhances the factors of success within an organization is essential to maintain a ship on a steady course, in order to survive the uncertainties of a constantly changing world and meet the new and challenging demands of its members and beneficiaries. For this reason, CATIE's plan of action is based on two essential pillars: the management and development of human talent and efficiency in the management of resources.

The best starting point is to first conduct a survey to assess how our employees perceive their working environment and, based on this indicator, determine the main issues of interest and areas for improvement. As in previous years, the results of our survey reflected our staff's strong sense of belonging to the institution, as well as significant improvements in communications, both vertical and horizontal.

In 2011, CATIE consolidated its excellent organizational environment by offering more than 15,000 training hours and many other continuous training activities. The strong emphasis on capacity building and improving the skills of our institutional community will receive an additional impetus with the launch of a new incubator for organizational talent that will result in better services and solutions for our partners, allies and beneficiaries.

### Polishing our treasure

In September 2011, CATIE launched its Continuous Training Program with the specific aim of strengthening the capabilities of CATIE's staff and contributing to their professional and personal growth. This initiative, led by the Human Development Unit, will design training plans, according to the job requirements for each position and will define the most effective means to address these needs.

The Continuous Training Program offers many benefits: for example, it will improve the work skills of our human resources to help them achieve their goals, it will create a culture of continuous learning throughout the organization and will contribute to their personal development as the institution's legacy to its employees.

These efforts are complemented with an administrative policy that tries to offer competitive salaries for the majority of the staff and a system of incentives for those who provide services through the Opportunities Management and Technical Services Unit (TSU).



*"Now I have a better understanding of each client's culture, and so I know how to treat them accordingly. I've learned to pay close attention when they speak to me, whether they are external or internal clients, understanding their needs so as to satisfy them and give them more of what they expect," Luisa García, secretary of CATIE's Forest Seed Bank, a participant in the Continuous Training Program's customer service course.*



*"The success of the project for the in vitro reproduction of abaca is based on excellent relations with our private sector partner, mutual trust, communications and tolerance. CATIE also has an excellent work team that combines three fundamental elements: technical expertise, a sense of responsibility and commitment." María Elena Aguilar, head of CATIE's Biotechnology Laboratory.*

## Sustainable Finances

In addition to a motivated and committed staff, an institution needs solid finances and the ability to make the right decisions at the right time, in order to meet the challenges of a globalized economy. For this reason, CATIE continued to implement its financial strategy for a second year.

Once again, the adverse conditions prevailing in the world put our creativity and commitment to the test in an effort to maintain the excellent indicators achieved in recent years. This was accomplished through a controlled use of the budget reserve and a more efficient management of the institution's resources, which enabled CATIE to keep a financial balance, secure in the knowledge that it is operating with solid finances.

This achievement is especially commendable if we consider that CATIE made substantial investments totaling over 631,000 USD in infrastructure, communications and crops on the commercial farm, using mainly its own resources, thanks to the higher level of liquidity achieved during the previous two years. As a result of these efforts, our investments greatly exceeded depreciation during this period.

The aim is to invest in CATIE's future by encouraging the incorporation of first-line technological resources and establishing an ideal support structure for creating new businesses that will make the institution less vulnerable to contextual changes in terms of financial support and more proactive in forging its own destiny.

### Integration through technology

In 2011, the entire organization of CATIE was connected together via Lync — a new unified communications platform that includes email, chat, telephone, videoconferencing and many more tools, making it easier to work together in pursuit of our vision, but with more modern tools. In addition to email, Lync provides facilities for online meetings such as video, voice and collaborative editing of documents. It even allows users to listen to emails on their mobile phones.

Being an academic institution, CATIE was able to acquire this platform for a fraction of the market price. In 2012, the institution will focus on learning everything about this tool in order to obtain the maximum benefit from it.

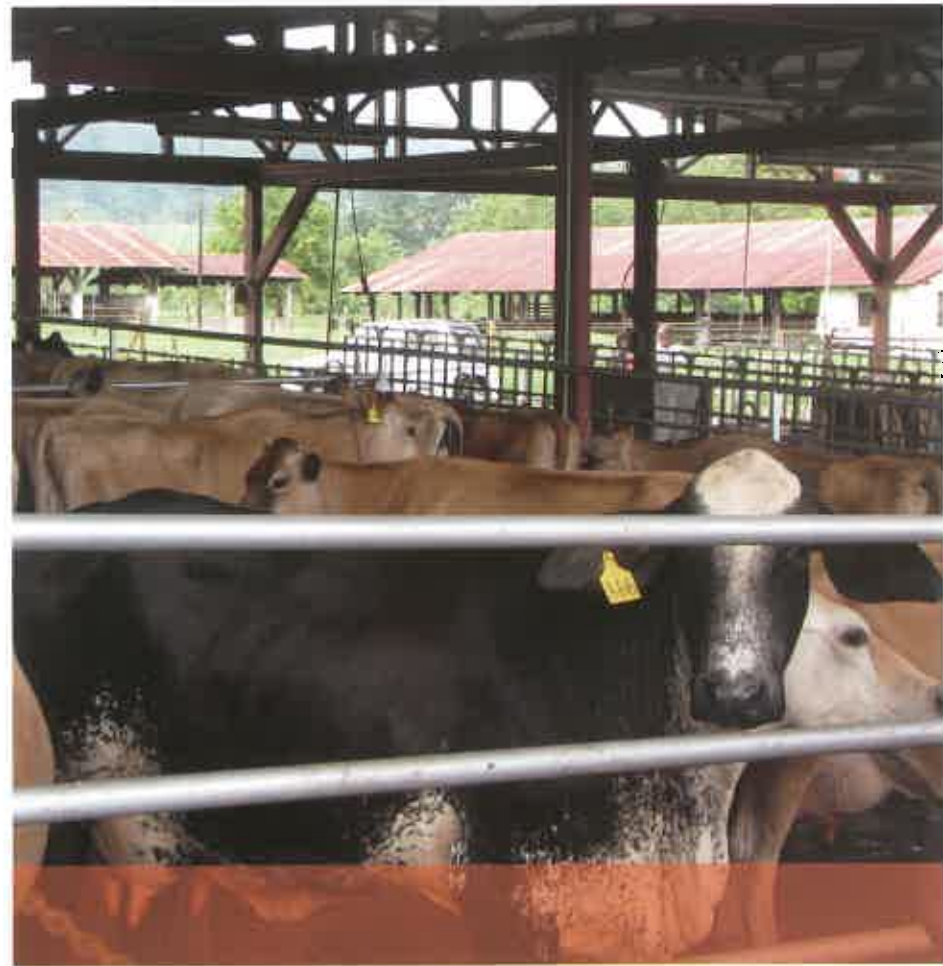
### Sustainable and productive dairy

After an intensive process to update its technology and production practices, CATIE's dairy is now a modern facility that combines productivity and quality with a comprehensive program to minimize its impact on the environment.

This production unit underwent a comprehensive modernization process, complemented with the GAMMA program's experience and contributions, to create a model dairy farm. Specific actions included: selecting dairy cattle breeds with the greatest potential to adapt to climate change; using rainwater for cleaning purposes and solar energy for heating water (in future, electricity will be generated using methane captured from cattle excreta); using an anaerobic biodigester; and, the partial substitution of nitrogenated fertilizers for organic composts obtained from these processes.

In the short term, these actions will help reduce the dairy's carbon footprint to just 0.6 kg per kilo of milk at the farm gate. These environmental indicators will be achieved while maintaining the increased productivity achieved over the last three years, which reached 15% in 2011.

The starting point for these important accomplishments was a major investment plan, which allowed for a faster than expected growth and the complete transformation of the dairy into a model of sustainable agricultural production.







### Laying our own foundations

The effort to generate our own resources has led to two major initiatives: on the one hand, efforts to promote and strengthen activities stemming from the management of the CATIE farms and other installed capacity and, on the other, the creation and consolidation of the Opportunities Management and Technical Services Unit (TSU). Diversifying our income sources through the sustainable generation of our own resources will enable CATIE to accomplish its mission for many decades to come, thereby reducing the risks of the past.

The TSU provides CATIE with a flexible corporate mechanism to meet the technical needs of its partner institutions and organizations, and to promote its technological and methodological services. As a result of the TSU's efforts, CATIE has been involved in 89 initiatives, most of which have evolved positively. During 2011 these endeavors were focused mainly on the Central American region, but plans are already in place to expand our actions into new areas, both through direct work and through partnerships, in order to make an impact and spread our solutions toward the south of the continent.

### Preparing the ground

In previous years we have reported on the strategic efforts undertaken at the Commercial Farm with the clear intention of laying solid foundations for the institution to become self-sustaining. This strategy has enabled CATIE to fulfill its priority of strengthening the farm's agribusiness activities through a robust investment to restore and stimulate the farm's productivity and subsequently increase its profitability.

This investment was used to renovate a major part of the sugar cane plantations, thereby boosting production. At the same time, the Biotechnology Lab and the hospitality infrastructure also received part of this capital injection, which provided improved conditions for them to expand and become consolidated.

The dairy deserves special mention, since the working model applied at this facility is expected to produce excellent financial results for CATIE in the future, while at the same time showcasing the knowledge and laboratory techniques that enrich and demonstrate the effectiveness of the approaches promoted by CATIE in silvopastoral systems.

### With tomorrow in mind

The planning of CATIE's commercial activities includes potential market niches for the medium and long term. In 2011, CATIE continued its work to rescue the international coffee collection and has made significant investments and efforts to conserve the coffee gene pool for the future of the region.

The production of forest seeds, a market that has suffered a major contraction in recent years, has demanded a creative effort to diversify its markets and products with the increasingly active involvement of the National Technical Offices (NTOs).

The promising growth in the production of abaca plants deserves special mention. Thanks to in vitro production techniques developed at CATIE, we achieved record deliveries of more robust and resistant plants to the Abatex firm, which is developing this industry in Costa Rica's northern and Caribbean regions. With the recent inclusion of aralia (an ornamental plant used in the foliage industry) as a promising niche market crop, it will be necessary to expand the area of short-term greenhouses to ensure the product's financial solidity. In 2011 our biotechnology laboratory focused on production and capacity building that is increasingly geared to business development and entrepreneurship, hand in hand with research, teaching and technical cooperation, mainly with the private sector.

### Hands and feet offer solidarity

Our business vision has not been an obstacle, but rather an incentive to produce responsibly. In March 2011, CATIE's Cabiria and Commercial Farms were both awarded the "Ecological Blue Flag," and efforts were made to obtain this same award for the entire campus. The Ecological Blue Flag program is a Costa Rican government initiative aimed at promoting better health and hygiene and improving public health, through compliance with certain parameters of sustainability by the institutions registered in the program.

CATIE also held its annual International Fair, increasing its income from sponsorship by 100% with respect to the previous year. For the first time, the "CatieNatura" race was organized with the participation of 400 athletes, which raised funds for in the establishment of a 2-hectare plantation commemorating the race. This has reinforced the image of the Fair as an educational, cultural and sports event, directed at families.



# Climate smart territories:

a result of our integrated approaches

In pursuit of our goal to become leaders in system and collaborative approaches that facilitate innovative and sustainable solutions to the complex challenges facing agriculture and natural resources in Latin America and the Caribbean, we have worked intensively to develop and adapt three major approaches: territorial co-management, sustainable livelihoods and value chains.

In this endeavor we not only integrate approaches, but also scales. Our Conservation and Production Unit led efforts in the field to increase productivity, while conserving resources. At local level, CATIE tries to facilitate negotiation and coordination among the different key stakeholders, in order to build a shared vision of territory. At national level, our actions are directed at creating an enabling environment for the application of best practices through the design of public and private policies based on scientific knowledge and institutional strengthening.

The purpose of integrating levels and approaches is to contribute to sustainable rural development through "climate-smart" territories that provide comprehensive solutions to current challenges such as climate change, food security, poverty and environmental degradation.

This approach will boost the capacity of these territories to provide sustainable goods and services, reduce emissions and increase the capture of greenhouse gases to better adapt to the pressures of climate change.

## Partners in a shared dream

All the actions carried out and the results achieved during 2011 would not have been possible without the solid and continuous support of our member countries, international donors and strategic partners. They are the ones who undoubtedly share the challenges of working for our region's development.

### Sustainable territories

In 2011 CATIE continued its efforts to recover pending membership quotas and collect the payments for current quotas. This task is vital, particularly if we consider that CATIE's investment in its member countries increased by over 2,000,000 USD, reaching a total of more than 13,500,000 USD.

#### Brazil: a new member and a new frontier

The opening of CATIE's Technical Office in Acre State has led to some important initiatives, such as the ALFA III project, in the Madre de Dios region of Peru, Acre in Brazil and Pando in Bolivia. This project is led by the Federal University of Acre (UFAC) and is implemented in the context of CATIE's Master's program in Development Practice, since it focuses on poor populations and on sustainable development.

In this same region, a consortium was formed with a view to developing a plan for the Amazon Fund for the Reduction of Deforestation and Degradation of Forests (REDD). This consortium is coordinated by the Cooperative Program on Technology Generation and Transfer for the South American Tropics (PROCITROPICOS) and the Inter-American Institute for Cooperation on Agriculture (IICA), with the participation of CATIE, the International Center for Tropical Agriculture (CIAT), the Institute of Climate Change of Acre (IMC), the Technology Foundation of the State of Acre (FUNTAC), EMBRAPA and UFAC.

In 2011, the Brazilian Agricultural Research Corporation (EMBRAPA) approved the Regional Project on Agroforestry Systems for the Amazon (SARAM, for its Portuguese acronym), aimed at creating efficient agroforestry systems compatible with producers' needs in the Amazon. In addition





### **A shared dream**

During 2011, CATIE continued to strengthen its relations with various strategic donors who, year after year, have supported our work (for example, Sweden, Finland and Norway). We also negotiated with new donors as well as those who have worked with us in the past, but this time we are planning new initiatives and expanding into new frontiers.

### **Germany returns as a strategic donor**

Germany has again become a key collaborator of CATIE, although the type of cooperation it offers is very different to that traditionally provided by other strategic donors. Our institution is currently involved in joint work initiatives with German cooperation agencies in the transnational Amazon territory, which includes Madre de Dios in Peru, Acre in Brazil and Pando in Bolivia, in projects to promote adaptation to climate change in rural areas of Guatemala, Honduras and Costa Rica and in the REDD Training Program.

During 2011 we also worked hard to incorporate Canada, Australia and New Zealand into this enterprise.

Since 2008, CATIE has strengthened its links with Brazil, in a process that concluded with the signing of an agreement whereby the State of Acre obtained membership of CATIE in 2010. This effort has been very significant, given that Acre has achieved considerable progress in the sustainable development of its territory and is regarded as an example of effective governance.

### **Standing shoulder to shoulder**

Our international partners are organizations and institutions that share our objectives, values and ideals. Through formal and less formal links, we have managed to boost our capacity, uniting efforts and achieving greater impacts than expected.

As mentioned previously, our work with centers such as CIRAD, CIFOR, Bioversity and CABI, and global organizations such as International Union of Forest Research Organizations (IUFRO), produced valuable results throughout 2011. Equally significant were our efforts to be recognized as a strategic partner of CGIAR in Central America. In the present global context, which is forcing organizations to change the ways in which they finance their operations, these platforms for scientific cooperation (with CIRAD, ICRAF, CIFOR and others) will become an increasingly important tool to enable CATIE to maintain the flow of products and services it provides to its member countries.

At the national level, the strategy to incorporate the National Advisory Committees (CAN, for their Spanish acronym) into CATIE's actions, through its National Technical Offices, has also improved our interaction with partners. Together we work on issues such as agricultural and environmental policies, forest policies and restoration plans for ecosystems in different countries. Using this strategy, we have regular interaction with over 100 partners.

Similarly, this year saw the development of numerous strategic alliances, with around 75 new partnerships formalized (ranging from international organizations to locally-organized groups in rural territories). Of particular importance were the 19 new agreements signed with partner organizations of the Support Mechanism for Indigenous Peoples Oxlajuj Tz'ikin and the letters of association with strategic partners such as Carana Corporation, Texas A&M, GOPA Consultants, and State Secretariats and Ministries in the countries.

### Promoting sustainable and inclusive value chains at national, regional and international level

Between 2008 and 2011, the Competitiveness and Value Chains Program led an international platform supported by the Ford Foundation and constituted by Bioversity International, CATIE, CRS, ICRAF, Intercooperation, LWR, MEDA, Swisscontact, Technoserve, and Winrock-Wallace Center. The objective was to develop a methodology and carry out 23 studies (in Asia, Africa, Latin America and the United States) to assess the impact on poverty of value chains with an asset-based approach. This research-action process confirmed the benefits of using a methodology with this approach.

Through the national platform **Learning Alliance in Nicaragua** (CATIE, CRS, FUNICA, GIZ, LWR, Oxfam-GB and Swisscontact, VECO-Mesoamerica and FENACOO) 33 business associations participated in a capacity-building process to ensure their successful insertion into sustainable and inclusive value chains in products such as coffee, cacao, vegetables, dairy products, honey, beans, maize and rice, in order to reduce poverty and promote well-being in rural areas. Five methodological guides were prepared to support this *action-learning* process.





### Inter-institutional cooperation between IICA and CATIE

In July, 2011 an inter-institutional bilateral cooperation agreement was signed between IICA and CATIE, with a view to working together on several fronts.

In the context of the Intergovernmental Climate Change Program (PRICA-ADO), IICA and CATIE implemented joint actions to mitigate the effects of climate change, and forums were organized at IICA, Panama and Brazil (State of Acre).

Cooperation efforts to promote innovation in production focused primarily on cacao. The main actions included IICA's participation as a regular partner of CATIE's Central American Cacao Project (PCC), visits by IICA representatives to CATIE's collections of plant genetic resources and the participation of both institutions in the National Cacao Committee in Bolivia.

In relation to institutional frameworks and capacity-building for the sustainable management of rural territories, both institutions participated in the regional technical support platform for the Central American Strategy for Rural Area-based Development (ECADERT), thereby helping to strengthen and support the regional commission.

The joint work on food security issues in Mexico focused studies on quinoa and urban agriculture and in Honduras, mainly on the issue of co-management of watersheds. Finally, cooperation on knowledge management continues actively through the Orton Memorial Library. During this period, we worked on the strategic plan, the financial plan and the acquisition of materials. In addition, five new publications were produced.



*“None of us had any previous experience in craftwork. Now, thanks to CATIE, I’m in this group learning and earning money because we sell the crafts we produce. This work is fun, it helps to distract me when I’m worried because my mind flies above the forest and I get all these ideas to decorate the figures that we make with dried wood,” Nubia Isabel García Urbina, Nicaraguan craft worker.*



# Acronyms

AdA	Central American Learning Alliance
CABI	International non-governmental organization
CIAT	International Center for Tropical Agriculture
CIFOR	International Center for Forest Research
CGIAR	Consultative Group for International Agricultural Research
CIRAD	French Agricultural Research Center for International Development
COMCAFE	National Coffee Commission
CTPT	Trinational Commission of the Trifinio Plan
ECADERT	Central American Strategy for Rural Area-based Development
EMBRAPA	Brazilian Agricultural Research Corporation
ERAS	Regional Agro-environmental and Health Strategy
ERCC	Regional Climate Change Strategy
FUNTAC	Technology Foundation of the State of Acre (Brazil)
FS	Field School
ICRAF	International Center for Research in Agroforestry
IICA	Inter-American Institute for Cooperation on Agriculture
IMC	Institute of Climate Change of Acre
INIA	National Agricultural and Food Research Institute
IUFRO	International Union of Forest Research Organizations
MAP	Mesoamerican Agro-environmental Program
MIA	Cooperative Project for Mitigation and Adaptation to Climate Change in Sustainable Forest Management in Ibero-America
MMA	Ministry of the Environment of Brazil
NTOs	National Technical Offices of CATIE
PCP	Scientific Partnership Platform
PROCITROPICOS	Cooperative Program on Technology Generation and Transfer for the South American Tropics
REDD	Reduction of Deforestation and Degradation in Forests
REMOCCME	Monitoring the Impact of Climate Change in Permanent Parcel Networks in Tropical Rainforests of Mesoamerica
SARAM	Regional Project on Agroforestry Systems for the Amazon
SICTA	Central American Integration System for Agricultural Technology
TSU	Opportunities Management and Technical Services Unit
UFAC	Federal University of Acre
UNA	National University of Costa Rica
UPM	Universidad Politécnica of Madrid

## National Technical Offices (NTO)

### **CATIE Belize**

Agriculture Administration Building  
Central Farm, Cayo District  
Belize  
Tel. + (501) 804-4680  
mibrahim@catie.ac.cr

### **CATIE Bolivia**

Av. Mrcal. Santa Cruz  
National Chamber of Commerce Building  
Subsuelo Oficina #11  
La Paz, Bolivia  
Tel.: (591) 223-10358  
catiebolivia@catie.ac.cr

### **CATIE Brazil**

Acre-Brasil representative  
FUNTAC  
Escritorio Nacional de CATIE Av. Las Acácias, 01- Zona  
A Distrito Industrial CEP 69917-100 Rio Branco AC  
Brasil  
catiebrasil@catie.ac.cr

### **CATIE El Salvador**

Av. Manuel Gallardo y Final 1era. Av. Norte  
Santa Tecla la Libertad, IICA building  
Second floor (next to MAG)  
El Salvador  
Tel. + (503) 2228-2996  
Fax. + (503) 2288-8658  
catiees@catie.ac.cr

### **CATIE Guatemala**

2da Av. 7-15, Zone 14-01014  
Los Arcos, Guatemala City  
P.O. Box 76-A  
Tel. + (502) 2366-2650  
Fax. + (502) 2366-1080 catieguatemala@catie.ac.cr

### **CATIE Honduras**

First floor, main building of SAG  
Boulevard Miraflores, Av. la FAO  
P.O. Box 2088  
Tel. + (504) 2235-6609  
Fax. + (504) 2235-6610  
catiehonduras@catie.ac.cr

### **CATIE México**

San Cristobal de Las Casas  
Chiapas, México  
Tel. 01 (967) 63 1 78 71  
catiemexico@catie.ac.cr

### **CATIE Nicaragua**

Km 81/2 highway to Masaya  
Ministry of Agriculture  
Managua, Nicaragua  
P.O. Box 4830  
Telefax. + (505) 2276-1026  
catiënicaragua@catie.ac.cr

### **CATIE Dominican Republic**

Av. George Washington corner with Alma Mater Banco  
Agricola building, 3rd floor, IICA offices in Santo  
Domingo, DN  
Dominican Republic  
catierd@catie.ac.cr

### **CATIE Panama**

Casa 2006-A, Calle 1ra. Este, Llanos de Curundú,  
corregimiento de Ancón  
Panamá City  
Telefax. + (507) 232-7745  
catiepanama@catie.ac.cr

## Institutional representatives

### **CATIE Costa Rica**

Headquarters, CATIE  
Cartago, Turrialba  
P.O. Box 7170 -30501, Costa Rica  
Tel. + (506) 2558-2552  
proyeccion@catie.ac.cr

### **CATIE Paraguay**

Headquarters, CATIE  
Cartago, Turrialba  
P.O. Box 7170 -30501, Costa Rica  
Tel. + (506) 2558-2552  
proyeccion@catie.ac.cr

### **CATIE Washington**

719 North Ivy Street  
Arlington, VA 22201  
United States of America  
rortvedt@catie.ac.cr  
proyeccion@catie.ac.cr

