

Conference of Ministers of Agriculture of the Americas
2019 Inter-American Board of Agriculture (IABA)

**Reports of the Tropical Agriculture Research and
Higher Education Center (CATIE) presented to the
Governing Council**

San Jose, Costa Rica
29-31 October 2019



Solutions for environment and development
Soluciones para el ambiente y desarrollo

2018 | ANNUAL REPORT



Governing Bodies of CATIE

The Inter-American Board of Agriculture (JIA): is the supreme body of CATIE. It is made up of 34 member countries which meet on a regular basis every two years.

The Governing Council: is composed of countries of Latin America and the Caribbean which are regular or adherent member countries of CATIE. The Inter-American Institute for Cooperation on Agriculture (IICA) has a permanent position in the Governing Council, as does the Inter-American Board of Agriculture.

Costa Rica

Renato Alvarado
Ministry of Agriculture and Livestock

Belize

Godwin Hulse
Deputy Prime Minister and Minister of Natural Resources and Agriculture

Bolivia

César Hugo Cocarico
Ministry of Rural Development and Lands

CATIE

Muhammad Ibrahim
Director General CATIE

Colombia

Andrés Valencia Pinzón
Ministry of Agriculture and Rural Development

Ecuador

Alexandra Peralta
Representative of the Inter-American Board of Agriculture (JIA)

El Salvador

Orestes Fredesman Ortiz Andrade
Ministry of Agriculture and Livestock

Guatemala

Mario Méndez Montenegro
Ministry of Agriculture, Livestock and Food

Honduras

Mauricio Guevara
Secretary of State of the Agriculture and Livestock Offices

IICA

Manuel Otero
Director General IICA

Mexico

Víctor Manuel Villalobos Arámbula
Secretary of Agriculture, Livestock, Rural Development, Fisheries and Food

Nicaragua

Edward Centeno
Ministry of Agriculture and Forestry

Panama

Eduardo Enrique Carles
Ministry of Agricultural Development

Paraguay

Rolando de Barros Barreto
Secretary of the Environment

Dominican Republic

Osmar Benitez
Ministry of Agriculture

Venezuela

Wilmar Castro Soteldo
Ministry of People's Power for Agriculture and Land

The Board of Directors: consists of several members who provide their services ad honorem and meet at least twice a year.

Renato Alvarado
Minister, Ministry of Agriculture and Livestock of Costa Rica

Manuel Otero
Director General, Inter-American Institute for Cooperation on Agriculture (IICA)

Muhammad Ibrahim
Director General of CATIE

Alexandra Peralta
Ecuador, representative Inter-American Board of Agriculture (JIA)

Nigel Poole
President of the Board of Directors, International Community

Gale Garnett
Member country

Ivonne García
Member country

Esteban Girón
Panama, representative of the Governing Council

Daniel Barthelemy
International Community

Juventino Gálvez
Member country

Laura Scandurra
International Community

Carlos Casamiquela
International Community

Inocencio Higuera
Member country

Helmut Eger
Comunidad internacional

CATIE: mission, vision and values



Mission

To achieve sustainable and inclusive human well-being in Latin America and the Caribbean, promoting education, research and outreach for the sustainable management of agriculture and natural resource conservation.



Vision

To be the international land grant university specializing in agriculture and natural resources that effectively integrates education, research and outreach in partnership with multiple partners and countries through a solid regional scientific platform.



Values

- Appreciation for diversity
- Entrepreneurial spirit
- Excellence
- Innovation
- Integration
- Service
- Accountability

The three pillars that support our philosophy



Education

CATIE is a graduate level university with wide prestige and international recognition, which is evidenced, among other reasons, by the following:

▶ It has the oldest International Graduate Program in Agriculture and Natural Resources of Latin America (since 1946) with more than **2500 graduates**.

▶ Its academic offer includes options for strategic courses, diploma courses, specializations, academic masters, professional masters and international doctorates in different thematic fields.

▶ Its students and graduates come from more than 40 countries of different continents, mainly America.

▶ The faculty consists of teachers and scientists from more than 25 countries in different regions of the world.

▶ It has joint master's and doctoral programs with prestigious international universities (eg, Bangor University, University of Idaho, University of North Texas).

▶ Its graduate programs are international in their approaches, modalities and contents.

▶ It has agreements with more than 50 universities and 400 partners in different parts of the world.



Research

The research carried out by CATIE has a systemic approach, for example, the **climate-smart landscapes approach**. Its starting point is a holistic evaluation of the problems and opportunities of rural areas with an emphasis on inclusion and gender. We maintain some specialized lines of research whose implementation and transfer of results is framed in projects with systemic approaches that contribute in an integral way to achieving sustainable and inclusive human well-being.

The main research and development actions are carried out by three scientific programs: the Agriculture, Livestock and Agroforestry Program (PRAGA), the Research Program on Development, Economy and Environment (PIDEA), and the Forests, Biodiversity and Climate Change Program (PBBCC). These programs address broad thematic areas (coffee, cocoa, climate change, sustainable livestock, policy formulation, forests, watershed management, biological corridors and protected areas, among others) and the lines of work pursue scientific contributions in accordance with the demands of our member countries and Latin America in general, the Sustainable Development Goals and international conventions.



Projection

We have 13 member countries in Latin America and the Caribbean and our actions reflect different levels of impact.

Our work includes the transfer of technology and knowledge and influence on policies at different scales, which contributes to poverty reduction and the economic, social and environmental development of the region.



Lines of research



Member countries

CATIE responds to the Sustainable Development Goals (SDG)

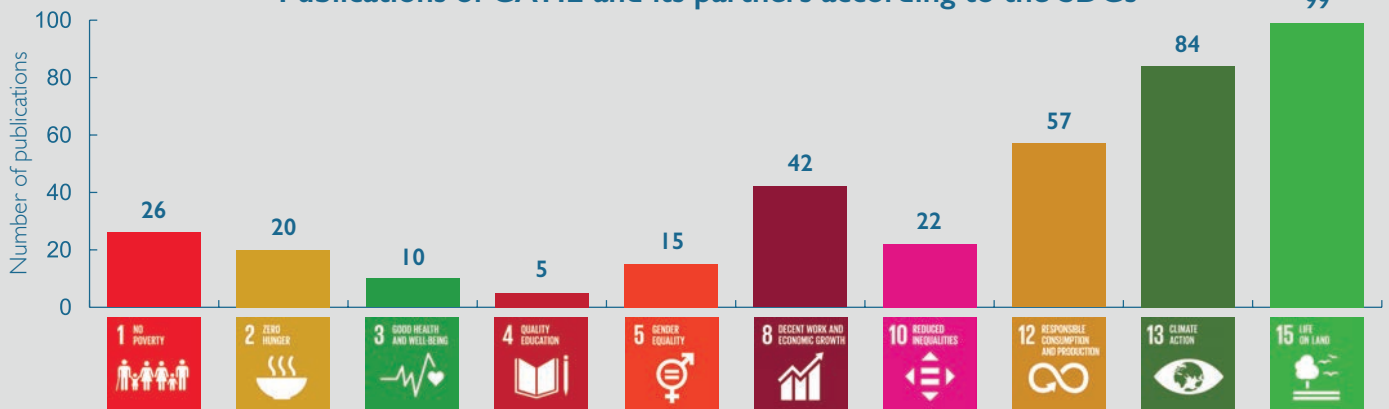
The research and development lines of CATIE's work are articulated with the Sustainable Development Goals (SDG). During 2018, the institution has generated important results for several of the goals. For example, the relationship that exists between the number of CATIE publications and the SDGs.

A high percentage of the publications have generated knowledge about life in terrestrial ecosystems (SDG 15), climate actions (SDG 13), responsible production and consumption (SDG 12), decent work and economic growth (SDG 4), poverty (SDG 1) and zero hunger (SDG 2). Apart from the publications, CATIE has worked with different international, regional and national institutions to develop plans and strategies, as well as policies that are important for countries in their efforts to comply with the SDGs. For example, CATIE has worked with the World Bank on the analysis of supply chains in the production of coffee, cocoa, meat, soybeans and African palm which put high pressure on forests and exacerbate deforestation.

This has allowed us to study and propose policy and market instruments that contribute to the reduction of deforestation and encourage responsible production and consumption.

On the other hand, CATIE is a member of the H20x20 program managed by the World Resources Institute (WRI) which has achieved increases in obtaining financial resources from the private sector and an increase in the restoration of degraded areas in Latin America (SDG 15). In Jamaica, with a project of the Inter-American Development Bank (IDB), progress has been made on the formulation of a proposal for payments for environmental services (PES) associated with the conservation of ecosystem services (SDG 15). In addition, CATIE has supported several countries in the region in the implementation of their strategies to intensify sustainable livestock and the coffee and cocoa production chains (SDG 12), as well as in the management of watersheds (SDG 15). Improvements in family farming that increase the productivity of food systems (SDG 2) and improve the quality of the human diet are also encouraged, contributing to the requirements for healthy food and nutrition (SDG 3).

Publications of CATIE and its partners according to the SDGs



CATIE lines of research and the SDGs



Line 1: Ecological intensification of agricultural, agroforestry and livestock systems to increase their productive efficiency and their resilience



Line 2: Ecosystem services for human well-being



Line 3: Restoration of ecosystem functions and services: water, soil, carbon sequestration



Line 4: Architecture of financial and nonfinancial instruments for the sustainable management of ecosystems and productive sectors



Line 5: Public policies and instruments of governance for human well-being and sustainable management of ecosystems



Line 6: Green, inclusive and sustainable value chains



Line 7: Vulnerability assessment and planning for climate action at national, regional and global levels



Line 8: Ecosystem and hydrological modeling and quantification of flows of carbon and greenhouse gases



Line 9: Analysis of decision making about production and consumption at the household level



The most outstanding in 2018



Systemic and transdisciplinary research

117 Publications

- | | |
|---|---|
| 36 Articles in scientific journals | 5 Reports and other publications |
| 9 Articles in technical journals | 3 Chapters in books |
| 1 Presentations at congresses | 15 Technical series |
| | 48 Theses |

Proposals for new projects

- | | |
|---|--|
| Developed 61 proposals and 37 are in process | USD 14 702 463
Signed or verbally approved proposals |
| Two project agreements were signed and 6 projects were approved verbally | USD 18 054 338
Proposals in process |

Promotion of sustainable livestock production



Establishment of a climate-smart tropical dairy model that also functions as a training center.

With this model of sustainable intensification, the following changes have been achieved:

- ▶ The land area dedicated to the activity has been reduced by almost 45% and the area liberated has contributed to an increase in forest area.
- ▶ The pastures have living fences to provide shade and thereby reduce the caloric stress of livestock.
- ▶ Jersey cattle have been crossed with other Zebu breeds to improve adaptation to climate change and variability.
- ▶ Efficiency in the use of water and fertilizers has been improved, the use of both has been reduced by more than 50%.
- ▶ Integrated manure management generates 50% of the electricity demand for the milking operation. Biofertilizer is also produced for the pastures and other agricultural crops of the farm.
- ▶ Milk productivity has increased by 500% and income by almost 200%.

Genetic material for the region

Cacao deliveries

2000 grafted plants to cocoa producers in Costa Rica
8300 seeds to three trading partners from two countries
5000 cuttings to a business partner
Clones of the CATIE-Rx series and genotypes from the International Cacao Collection to producers, private companies and research institutions of Costa Rica, Panama and the United States
In partnership with the ECOM company, we started the production and large-scale sale of **CATIE-Rx clones in Nicaragua**

Distribution of forest seeds

4800 kg of forest seeds for **40** species to **220** customers in **11** countries
16 accessions of horticultural seeds to eight clients in Costa Rica

Production and sale of coffee genetic material

22,000 plants for somatic embryogenesis
148,000 plants from rooting coffee cuttings
In partnership with Gaia Artisan Coffee, close to **1 million** plants were distributed to the Central American coffee sector

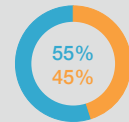


Scientific and professional training



First year students in 2018

66 students from 20 countries



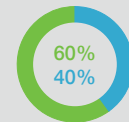
36 men



30 women

2018 Graduates

33 students from 11 countries



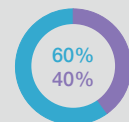
20 women



13 men

Professionals trained in special and strategic courses

5040 professionals from 22 countries



3024 men



2016 women



Scholarships and USD obtained through scholarships

53 scholarship recipients from 19 countries

USD 639 032 Amount of contribution in scholarships

Donors: Fundátropicos, CATIE's own funds, external scholarships (e.g. German academic exchange service DAAD, USAID, CONACYT of Mexico, IFARHU of Panama, Guatefuturo, AGROSAVIA and Colfuturo de Colombia, etc.) and CATIE project grants.



CATIE a strategic partner

Country →	Belize	Bolivia	Brazil	Chile	China	Colombia	Costa Rica	El Salvador	United States	Guatemala	Haiti	Honduras	Jamaica	England	Mexico	Nicaragua	Panama	Paraguay	Peru	Dominican Republic	Uruguay	Totals	Amount in USD
Agreements/Contracts	1	1	-	-	-	3	33	1	1	7	1	2	1	-	-	3	7	1	1	1	1	65	USD 11 774 265,22
Cooperation agreements	-	-	-	-	-	-	6	-	-	3	-	1	2	-	-	2	1	-	-	2	-	17	USD 1 341 872,91
Commercial contract	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	USD 647 500
Letters of understanding	-	-	1	3	1	4	7	3	-	3	-	3	-	1	8	-	2	-	2	5	-	43	



Dissemination and positioning

2 525 530

public reached on social networks

(Twitter, LinkedIn, Instagram, Facebook)



Webpage

511 636

Pages viewed

178

Countries

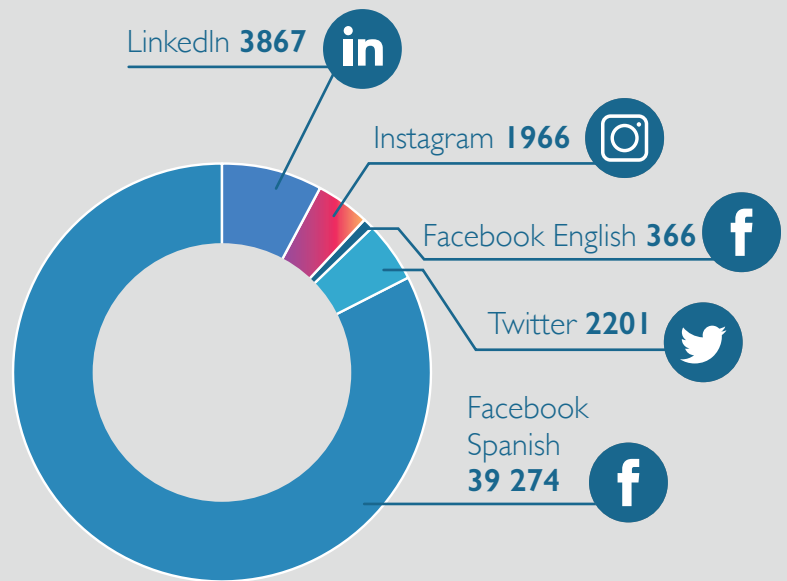
198

Web News

232 469

Visits to notes

Number of followers on social networks as of December 2018



Financial sustainability

There was a positive balance of **USD 15 030** for 2018.

USD 1.2 million in country quotas were recovered.



Personnel

Number of personnel: **270 employees**

Employees with doctorate degrees: **21**

Employees with master's degrees: **59**



Promoting quality education

*In 2018,
we promoted
a dynamic
teaching system
adapted to
the social and
labor demands
of today's
world.*



The CATIE Graduate Program is characterized by a clear commitment to service to the communities of Latin America and the Caribbean and to encouraging excellence, leadership and cooperation among the student community.

Strategic alliances

- ▶ Two joint doctoral agreements (University of Bangor and University of Idaho) were renewed to continue offering the joint programs.
- ▶ Three agreements with institutions of the Dominican Republic committed to higher education: Ministry of Higher Education Science and Technology (MESCyT), the Fundapec educational credit foundation and the General Directorate of Multilateral Cooperation (DIGECOOM) to finance full scholarships to Dominican students.
- ▶ Two agreements with mixed institutions that support higher education (Guatefuturo and Hondufuturo) for joint financing of students who wish to pursue graduate studies at CATIE.
- ▶ Two agreements with Colombian institutions (Agrosavia-formerly Corpoica and Fundación Natura) for scholarships and joint research.
- ▶ Agreement with the National University of Forestry Sciences (UNACIFOR) to support study at CATIE for the teaching staff.

All these agreements allow the Graduate School to ensure a significant influx of human and financial resources.



Towards virtuality

In a globalized world increasingly immersed in the continuous advancement of new technologies, it is necessary to have master's degrees that offer countries a study opportunity through excellent online education. Apart from the virtual mastery of Integrated Watershed Management, in 2018 progress was made on the definition and design of two new virtual masters:

Management of Agribusiness and Sustainable Markets

Agroecological Intensification and Nutritional Food Security (with support from IICA)

A digital marketing plan was implemented for these master's degrees, in order to ensure the enrollment of students in each one.



Orton Memorial Library in numbers

Updating of the databases

1051 digital or print documents processed and entered in the Orton Catalogue and the Institutional Repository

Orton Catalogue-SIDALC

564 403 visits (Google analytics)

CATIE Repository

71 179 visits (Google analytics)

Journal articles downloaded through the Consortium of CGIAR Libraries

2434



Success stories



Photo: Le Nouvelliste.com

Jobert C. Angrand
(Haiti, class of 2000-2001)
Ministry of Agriculture,
Natural Resources and
Rural Development
of Haiti

He was appointed in April 2018 and is recognized as having served for several years as executive coordinator of the National Coffee Institute of Haiti. He is an agricultural engineer and has an academic master from CATIE in the area of agroforestry.

"It is gratifying to see how many of CATIE's Haitian graduates occupy or have held leadership positions in academic, research, public sector and private sector institutions, which demonstrates the quality of the education they received at CATIE, where they obtained the tools and capabilities necessary to perform with excellence and face the challenges of the world," Isabel Gutiérrez-Montes, Dean of the Graduate School.

Elba Tatiana Espinosa Quiñones
(Peru, class of 2007-2008) Jane Goodall Hope Recognition and Inspiration Ranger Award



She received this award for the conservation work she has carried out as founder/director of ARBIO for more than 15 years in the department of Madre Dios in the Peruvian Amazon, protecting forests from the threat of deforestation. It is the first time that this award has been won by a person from Latin America.

Quiñones is an engineer in Forestry Sciences with experience in forest administration and management in the Peruvian Amazon: permanent production forests, management of non-timber forest products, ecotourism and conservation. She has a master's degree in Management and Conservation of Tropical Forests and Biodiversity from CATIE with an emphasis in Environmental Socioeconomics and Climate Change.



Strategic research areas

Research on Development, Economics and Environment

In 2018, the staff of the Research Program in Development, Economics and Environment (PIDEA) was strengthened with the promotion of an official as director of the Latin American Chair in Environmental Decisions for Global Change (CLADA) and the creation of a postdoctoral position to work on matters related to public policies and economic incentives, as well as to strengthen the staff of professors of the Master's Degree in Economics, Development and Climate Change. This last position is financed with funds from the Environment for Development initiative (EfD).

In addition, the program participated in the execution of 31 projects/consultancies in the fields of water management, environmental services, improvement of livelihood resilience, green and inclusive value chains and green economics.



Strategic actions

Water management

A pre-feasibility study was carried out to stimulate socioeconomic development and adaptation to climate change in the dry corridor region of Costa Rica as part of the Water Supply Project for the Tempisque River Watershed and Coastal Communities (PAACUME).

In addition, through CLADA and under the framework of the ChorotAgua project (a project developed in Costa Rica to address the effects of climate change on water resources), agroforestry practices were studied that contribute to climate change adaptation in several cantons of Guanacaste province in Costa Rica.

On the other hand, within the Community Water Monitoring Project (EGAP), the use of information technology tools was implemented to facilitate adaptation to climate change by local institutions in Central American regions with water shortages.

Finally, community water management in rural aqueducts was strengthened in the flow and connectivity areas of the Guácimo-Pococí Aquifers of the Tortuguero Priority Geographic Area in Costa Rica to influence the conservation, maintenance and restoration of tropical forests.

Environmental services

In 2018, the design of a payment program for environmental services for the protection of water resources in the Yallahs and Hope basins in Jamaica began, which aims to technically support the development and implementation of a payments for environmental services program for the protection of the main river basins of the cities of Kingston and St. Andrew in Jamaica.

The Ecosystem Services Accounting for Development project (ESAfD) continues to contribute to the development of accounting for ecosystem services in Costa Rica and other countries worldwide, by improving knowledge and empirical experience in the appraisal of such services in line with national accounting principles.

Resilient livelihoods

Work was done on the formulation of a manual and a Field School curriculum on Climate Smart Agriculture (CSA) in Belize, to support the capacity-building activities developed by the extension service of Belize to help farmers improve their capacity to adapt to climate change.

Other technical advising consisted of the identification and selection of measures to adapt to climate change, in order to improve the resilience of vulnerable people in Guatemala. Within the framework of this study, the technical, environmental and social feasibility of the most appropriate adaptation measures to be implemented in the project "Increase in the climate resilience of rural families through the restoration of landscapes and degraded lands in Guatemala" were defined, to be submitted by FAO to the Green Climate Fund.

After six years (2012-2018), the CASCADA project evaluated the vulnerability of subsistence smallholders and coffee producers to climate change and developed strategies for Ecosystem-based Adaptation (EbA).

Green and inclusive value chains

In the framework of the value chain initiative for non-timber forest products, research, technical assistance and education activities were carried out with 60 producers in cocoa, medicinal plants and pepper value chains. Market opportunities were identified through specific studies and in a business roundtable.

The project for the Evaluation of Five Value Chains in Central America (consortium ProFound-CATIE) evaluated cocoa, coffee, fresh and processed fruits and vegetable value chains, as well as aquaculture in six countries: Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama. The aim is to provide the necessary inputs to the Center for the Promotion of Imports from developing countries (CBI) for the selection of the chains where the regional project on Strengthening Central American capacity to trade in goods and services will be developed in order to take advantage of the EU/CA Association Agreement (2018-2022).

The evaluation of the social, economic and commercial impacts of single-use plastic and compostable and renewable alternatives was also carried out as a basis for the National Single-Use Plastic Substitution Strategy, led by the United Nations Program for Development (UNDP).

Under the framework of the Indigenous Training project and special projects in the Brunca area of Costa Rica, research, technical assistance and training activities were developed with the objective of preparing 195 indigenous people to formulate sustainable production projects.

Green economy

The EFD Collaborative Project: Oceans and Marine Resources focused on reducing marine (plastic) pollution, developing effective regulation to control non-sustainable fisheries, and determine the economic benefits of sustainable aquaculture for developing countries.

Similarly, the project "LatinoAdapta: Strengthening Links between Science and Politics in Latin America", which was carried out under the CLADA framework, also prepared and published the National Report of Costa Rica: "Knowledge gaps for the implementation of plans and actions for adaptation to climate change".

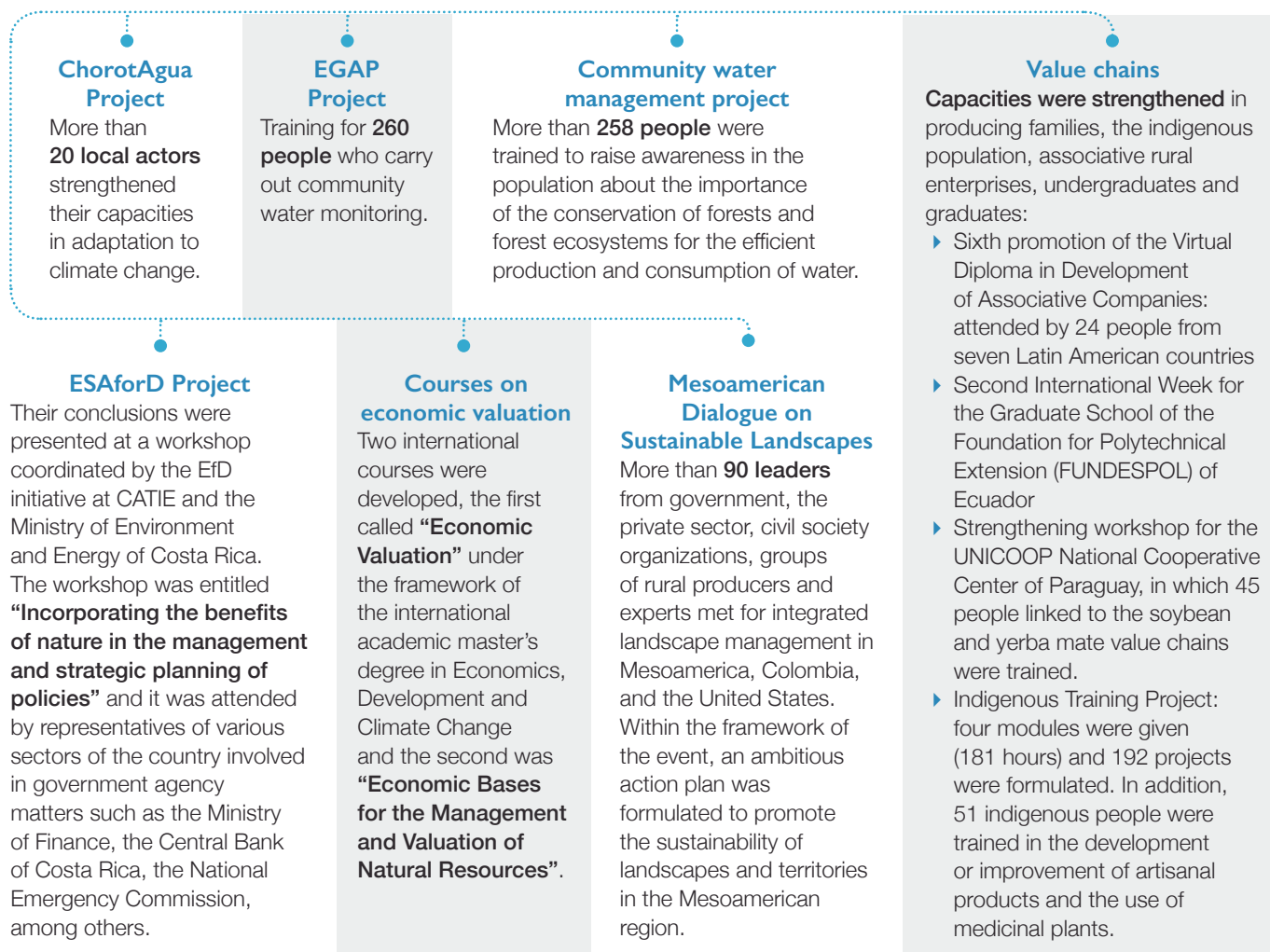
On the other hand, through technical advising, investment plans were prioritized and prepared for the 28 priority actions identified in the Nationally Determined Contributions (NDCs) of Costa Rica. This work served as an input for the decisions of the Directorate of Climate Change of the Ministry of Environment and Energy of Costa Rica.

Since the beginning of 2018, the IDEA program has coordinated the implementation of cooperation activities between CATIE and the Climate Technology Centre & Network (CTCN). CATIE is one of the 16 "consortium partners" that were selected based on their extensive experience in adaptation and mitigation matters, the technology cycle, and the use and development of climate technologies.





Capacity-building



Innovative tools and methodologies

The ChorotAgua project implemented an innovative leisure/recreational methodology called ChorotAgua Festivals that aimed to educate and raise awareness about the stewardship of water resources and the environment.

Similarly, under the ESAforD framework, a methodology was developed to identify the value of ecosystem services provided by ecosystems at different distances, for example, from an agricultural field. The use of spatial and geographically representative data allowed the derivation of unit values for the ecosystem service benefits studied. This methodology was implemented simultaneously by CATIE (EfD centers for Central America) and other EfD centers in China, Ethiopia, Kenya, Tanzania, South Africa and Sweden.

The collaborative EfD program: Oceans and Marine Resources provides comprehensive knowledge-based advice to national policy processes to achieve Sustainable Development Goal 14. The program involves researchers from 10 different countries: Chile, China, Colombia, Costa Rica, Ghana, India, Nigeria, South Africa, Tanzania and Vietnam.



Outreach

The ESAforD results will support current efforts in the statistical division of the UN, the World Bank (WAVES) and several countries for the accounting of ecosystem services that aim to more comprehensively incorporate the economic contributions of nature to the gross domestic product (GDP).



Success story

“We see CATIE as the strategic partner we have very much needed,” Xinia Espinoza, director of the Brunca Regional Mixed Assistance Institute (IMAS), recognizing the good results of CATIE’s Agribusiness Unit in the Indigenous Training project. This project highlights innovative elements such as tools adjusted to the indigenous reality, an integral process that respects their cosmivision and promotes the empowerment of a historically invisible population with high participation (91%) during a 181-hour training process and personalized advising. In addition, it has been one of the most interesting interventions in terms of results and alliances between government entities, private companies and academia.



Partners

Environment for Development (EfD) • Climate Technology Center and Network (CTCN) • National Underground Water, Irrigation and Drainage Service (SENARA) • Fundecooperation for Sustainable Development • Johns Hopkins University • Costa Rica Forever Association • National Environmental Protection Agency (NEPA) of Jamaica • Inter-American Development Bank (IDB) • Foundation for the Development of the Central Volcanic Mountain Range (FUNDECOR) • Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development and Immigration of the Government of Belize (MAFFESD) • United Nations Development Program (UNDP) • Organization of the United Nations for Food and Agriculture (FAO) • CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) • Bioersity International • EcoAgriculture Partners



Publications

- Blackman, Allen; Alpizar, Francisco; Carlsson, Fredrik; Rivera Planter, Marisol. 2018. A Contingent Valuation Approach to Estimating Regulatory Costs: Mexico’s Day Without Driving Program (en línea). *Journal of the Association of Environmental and Resource Economists* 5(3). Consultado 18 feb.2018. Disponible en <https://www.journals.uchicago.edu/doi/full/10.1086/697416>
- Cuenca, Pablo; Robalino, Juan; Arriagada, Rodrigo; Echeverria, Cristian. 2018. Are government incentives effective for avoided deforestation in the tropical Andean forest? (en línea). *PLOS one* 13. Consultado 18 feb.2018. Disponible en <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0203545&type=printable>
- Escobedo, A; Chaves, E; Navarro, G. 2018. El enfoque de cadenas de valor en el sector forestal de Centroamérica (en línea). In: M. Gutiérrez, G. Navarro and L. Orozco, ed., *Modelos de negocios para el manejo forestal en América Central*. Turrialba, Costa Rica, CATIE. p.17-22. Consultado 18 feb.2018. Disponible en http://repositorio.bibliotecaorton.catie.ac.cr/bitstream/handle/11554/8784/Modelos_de_negocios_para_el_manejo_forestal.pdf?sequence=4&isAllowed=y
- Gutiérrez-Montes, Isabel; Arguedas-Marín, Maureen; Aguero, Felicia; Mercado, Leida; Sellare, Jorge. 2018. Contributing to the construction of a framework for improved gender integration into climate-smart agriculture projects monitoring and evaluation: MAP-Norway experience (en línea). *Climatic Change* 1-14. Consultado 18 feb.2018. Disponible en <https://link.springer.com/content/pdf/10.1007%2Fs10584-018-2231-1.pdf>
- Hasselquist, NJ; Benegas, L; Rounsard, O; Malmer, A; Ilsted, U. 2018. Canopy cover effects on local soil water dynamics in a tropical agroforestry system: Evaporation drives soil water isotopic enrichment (en línea). *Hydrological Processes*, 32(8):994-1004. Consultado 18 feb.2018. Disponible en <https://onlinelibrary.wiley.com/doi/abs/10.1002/hyp.11482>
- Lundberg, L; Persson, M; Alpizar, F; Lindgren, K. 2018. Context matters: exploring the cost-effectiveness of fixed payments and procurement auctions for PES (en línea). *Ecological Economics* 146:347-358. Consultado 18 feb.2018. Disponible en <https://www.sciencedirect.com/science/article/pii/S092180091730188X>
- Muñoz-Brenes, Carlos; Jones, Kelly; Schlesinger, Peter; Robalino, Juan; Vierling, Lee. 2018. The impact of protected area governance and management capacity on ecosystem function in Central America (en línea). *PLOS ONE* 13. Consultado 18 feb.2018. Disponible en <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0205964&type=printable>
- Pfaff, A; Robalino, J; Reis, EJ; Walker, R; Perz, S; Laurance, W; Bohrer, C; Aldrich, S; Arima, E; Caldas, M; Kirby, KR. 2018. Roads & SDGs, tradeoffs and synergies: learning from Brazil’s Amazon in distinguishing frontiers (en línea). *Economics: The Open-Access, Open-Assessment E-Journal* 12(5):1-26. Consultado 18 feb.2018. Disponible en <http://www.economics-ejournal.org/economics/discussionpapers/2017-83>
- Rovai, AS; Twilley, RR; Castañeda-Moya, E; Riul, P; Cifuentes-Jara, M; Manrow-Villalobos, M; Horta, PA; Simonassi, JC; Fonseca, AL; Pagliosa, PR. 2018. Global controls on carbon storage in mangrove soils (en línea). *Nature Climate Change* 8:534–538. Consultado 18 feb.2018. Disponible en <https://www.nature.com/articles/s41558-018-0162-5>

Agriculture, Livestock and Agroforestry

In 2018, the Agriculture, Livestock and Agroforestry Program (PRAGA) achieved substantial progress in its four lines of action: agrobiodiversity, livestock production, cocoa-coffee and agroforestry.

Strategic actions

Quality coffee

International Coffee Collection: thanks to financial support from the Coffee Institute of Costa Rica (ICAFE), agronomic management work was carried out in the collection, which included shade adjustment, weed management, fertilization and pruning. In addition, 103 accessions of coffee seeds were distributed to four countries: Guatemala, Panama, Costa Rica and El Salvador.

Genetic improvement: to meet the demand for new genetic materials in the Central American region, 52 new coffee hybrids were created using seven accessions with rust tolerance and five varieties with excellent cup quality. Among the progenitors used, four rust-tolerant accessions were used for genetic improvement processes for the first time.

Core Collection: in alliance with World Coffee Research (WCR), all the accessions conserved at CATIE were morphologically characterized. The information is available on the Genesys platform. The fruits of all the accessions were tasted by the Fine Coffee Association of Costa Rica and the Origenes Coffee Grower, Costa Rica, selecting 25 accessions, which were later tasted by Q-Grader tasters, with six of them achieving an excellent quality grade.

Central American Program for Integrated Coffee Rust Management, PROCAGICA (developed in cooperation with IICA and Cirad): in both Central America and the Dominican Republic, coffee rust management technologies are being validated on farms. In addition, an agreement was reached between regional PROCAGICA and PROCAGICA-Dominican Republic for CATIE to orient interventions that improve the redesign of the coffee plantations to be renovated with the implementation of the best agronomic and agroforestry practices.

Dominican Coffee Institute (INDOCAFE): within the framework of this project, expert opinions on the types of coffee plantations in the Dominican Republic were systematized and biophysical and structure data were collected in 400 coffee plantations. The project aims to generate the information necessary to guide interventions for renovation and/or rehabilitation of Dominican coffee plantations.

Ecuadorian coffee and cocoa program: this program established a long-term agroforestry coffee trial in Ecuador. CATIE guided the process and left a plan for ecosystem services assessments over time.

GAIA Artisan Coffee: work continued on the provision of quality genetic material and evaluation of new materials to make them available to the coffee sector in partnership with the private sector. A new agreement was signed for the production of 30,000 hybrid coffee plants.

Project: Conserving neotropical migratory birds through the management of ecosystem services on coffee farms: funded by the US Fish and Wildlife Service (USFWS) to work with coffee farms distributed within the area of influence of the Volcanic Biological Corridor Central Talamanca (CBVCT). To date, the project has achieved participation commitments from at least 30 coffee producers, and it has begun to establish experiments (bird and bee exclusions) for the simultaneous evaluation of the ecosystem services of pest control by birds and pollination by bees.

New projects: an agreement was signed with the GAIA Artisan Coffee and Cafetalera Origenes companies, with the aim of investigating new genetic materials from CATIE's International Coffee Collection that have promising characteristics and potential to be marketed for their cup quality.



Superior cacao clones

Research on the genetic improvement of cacao has allowed identification of the best clones with tolerance to the main diseases that affect this crop, in partnership with renowned organizations in the region. In 2018, methodologies were also developed for the ideal spatial arrangement of cacao clones in order to maximize their productivity.

In 2018, we continued the implementation of four projects related to genetic improvement funded by the United States Department of Agriculture (USDA) -Mars, USDA-Puerto Rico, World Cocoa Foundation and Nestlé-Switzerland, respectively. These projects generated data that will help identify the best clones with tolerance to diseases such as monilia and black pod in the next two and three years. With the USDA-Puerto Rico project, data related to the capacity of cacao clones to absorb cadmium metal was generated. Progress was also made in the generation of data to identify high quality cocoa bean clones, under three projects funded by the chocolate factories Lindt in Switzerland, Guittard Chocolate Company in the United States and Max Felchlin in Switzerland.

On the other hand, in conjunction with the Maya Kakaw cooperative in Guatemala, the methodology for the construction of compatibility and incompatibility matrices was adjusted, so that the degree of compatibility of 10 clones of interest for Guatemala is already known. The germplasm conservation project with the Franceschi Chocolate company in Venezuela allowed us to have important materials in custody that in the future could be used for genetic improvement.

Finally, in the framework of the actions of the cocoa project KOLFACI, funded by the government of Korea, in 2018 it was possible to establish a network of 32 plots for participatory cacao research, where the performance of promising clones will be evaluated in eight countries (Peru, Colombia, Panama, Costa Rica, Nicaragua, Honduras, Guatemala and the Dominican Republic), with the application of modern agronomic-agroforestry techniques. Thanks to the positive evaluation of the project's progress, the disbursement was made to finance the second year of the initiative in 2019.

Sustainable and climate-smart livestock production

Finally, in livestock production, CATIE continued to consolidate its position as a leader in the promotion of sustainable, low carbon, and biodiversity-friendly intensive livestock systems. In this area the program executed several projects in Latin America. Moreover, various processes for formulating national policies and strategies linked to the livestock sector for Central American and Caribbean countries, were accompanied; in addition, technical support was provided for the formulation of Nationally Appropriate Mitigation Actions (NAMA) for livestock.

During 2018, there was participation in seven projects framed under sustainable livestock management and intensification in five countries: Costa Rica, Mexico, Belize, Honduras and Uruguay, as well as a project at the Latin American level with the Regional Agricultural Technology Fund (FONTAGRO) and the government of New Zealand.

In three states of Mexico, progress was made on the implementation of the Biodiversity and Sustainable Agrosilvopastoral Livestock Landscapes project known as BioPaSOS, of the International Climate Initiative (IKI), which is executed by CATIE and the Inter-American Institute for Cooperation on Agriculture (IICA), in coordination with the National Commission for the Knowledge and Use of Biodiversity (CONABIO) and the Secretariat of Agriculture and Rural Development (SADER). In this project, six investigations focused on evaluating different ecological and productive aspects, livestock management, biodiversity and ecosystem services. Outstanding studies include:

1. Analysis of the perception of livestock producers about the factors that exist and that continue to contribute to the loss of biodiversity in landscapes dominated by livestock.
2. The evaluation of the contribution of cattle ranches to biodiversity conservation, by studying floristic composition, richness, abundance and diversity of arboreal species in cattle ranches.
3. The impact of forest fires on ecosystem services in livestock landscapes, among others.



At the institutional strengthening level, more than 10 agreements for the establishment of strategic alliances with partners of the governmental and private sectors, and academic institutions have been signed.

Within the framework of the project “Delivering multiple global environmental benefits through the sustainable management of productive landscapes” and in conjunction with the Ministry of Environment of Honduras and the GEF-UNDP Global Environment Facility, CATIE developed a strategic plan for the establishment of a National Sustainable Livestock Platform, which will be launched in 2019. In addition, a differentiated credit proposal was designed to promote sustainable livestock production and at least 14 successful experiences of sustainable livestock production were documented in Honduras. In addition to this, two strategic investigations were carried out on 1) carbon balances in livestock farms, and 2) the prioritization of adaptation and mitigation practices. Both studies will be part of the livestock NAMA for the country as instruments for the achievement of their Nationally Determined Contributions (NDC).

As part of the actions for the new project of the Inter-American Development Bank (IDB) called *Developing a*

climate-smart and green cattle sector through technological innovations and strengthening local institutions, which is carried out with the Belize Livestock Producers Association (BLPA), a pilot project was negotiated to promote bovine production chains that are climate-smart and where CATIE will support farm plan designs based on silvopastoral systems, as well as the design of production chains and project monitoring and evaluation.

In 2018 the Environmental Livestock Production Unit made progress on strengthening regional and national platforms and provided support to the countries to develop their strategies for the sustainable intensification of livestock. For example, CATIE continued with the coordination of the regional platform in Latin America called “Platform for the Sustainable Intensification of Livestock Production”, which is financed by New Zealand, FONTAGRO and CATIE. In 2018, it was possible to develop a regional agenda for research related to sustainable livestock intensification in Latin America. Four webinars were also developed for the dissemination of knowledge about greenhouse gas estimation methodologies, the management of silvopastoral systems, and best manure management practices on livestock farms.

Agrobiodiversity

In 2018, 4800 kg of forest seeds of 40 species were distributed to 220 customers in 11 countries (Belize, Costa Rica, Ecuador, Colombia, Ghana, Mexico, Nigeria, Peru, Sierra Leone, Thailand and the United States) along with 16 accessions of horticultural seeds to eight clients in Costa Rica.

The quality of the seeds is increasingly recognized worldwide, which was reflected in a significant increase in exports of forest seeds to companies in Asia and Africa, in addition to the traditional market in the American tropics.

GAIA received over 22,000 mother plants of five different hybrids (Centroamericano, Milenio, Casiopea, Excelencia and Esperanza). Due to growing demand from coffee producers, CATIE and GAIA signed a new agreement at the end of 2018 to increase the number of plants that the Center’s Biotechnology Laboratory distributes to GAIA from 21,000 to 30,000, thereby consolidating the commercial relationship between CATIE and this private company.

In addition, the Biotechnology Laboratory initiated the in vitro establishment of selected coffee and cacao materials, in order to diversify the offering of promising varieties.

In the collections in long-term storage, regeneration was achieved for 100 squash (*Cucurbita moschata*), bean (*Phaseolus spp.*), jicama (*Pachyrhizus erosus*) and corn (*Zea mays*) accessions, and 10,886 seeds were collected from 13 coffee accessions which will be used in cloning programs and for distribution to coffee growers.

As part of the celebration of the tenth anniversary of the Svalbard World Seed Vault in Norway, CATIE sent duplicates to this vault of 591 accessions of 29 crops, this being the largest number of seeds that CATIE has ever sent to the vault. With this, a total of 1,534 duplicate accessions has been reached, representing 24.7% of the total germplasm preserved by CATIE in its cold chamber.

In 2018 the Botanical Garden was visited by 4,453 people and it received an award from the Ecological Blue Flag Program and the Sustainable Tourism Certificate and Code of Conduct. A botanical revision of 165 species was also carried out and a new garden with 40 Bromeliad species was established.





Capacity building

PROCAGICA

CATIE provides **technical assistance and training** to technicians and coffee producers from six different countries.

Multiplication gardens

Following the successful propagation of **coffee F1 hybrids** through rooted cuttings, several companies became interested in using this propagation method for the multiplication of other select varieties of CATIE's International Coffee Collection. Toward this end, the establishment of multiplication gardens began with five select varieties and a first delivery of 8500 plants was made, some of which had not been propagated previously using clonal methods.

Cacao agroforestry systems

At least **20 technicians working with cacao** in eight Latin American countries (Peru, Colombia, Panama, Costa Rica, Nicaragua, Honduras, Guatemala and the Dominican Republic) were trained in the management of cacao agroforestry systems.

BioPaSOS Project

The project has achieved the establishment of learning communities in its three intervention territories, through which it has achieved the implementation of more than **60 Field Schools (ECA)**, strengthening the capacities of more than 900 livestock families, approximately 30% of which are women, on issues related to the adoption of good livestock practices, as well as the importance of biodiversity conservation to promote climate-smart livestock production.

International workshop

CATIE, FONTAGRO, Global Research Alliance, New Zealand and FAO organized the international workshop **"Climate change and livestock development in Latin America and the Caribbean: requirements for the formulation of knowledge, policies and projects for investment"** with 65 representatives of national, regional and international organizations from 20 countries attending. Under the workshop framework it was agreed to establish a plan for the standardization of methodologies for the estimation of greenhouse gas emissions, as well as the lines of research and financial mechanisms to promote the adoption of technologies for sustainable livestock production intensification.



Innovative tools and methodologies

Through the PROCAGICA regional and PROCAGICA-Dominican Republic projects, the Zig-Zag methodology is implemented for training and extension work on innovative practices and approaches. This methodology is based on training workshops given every two or three months to the technicians, which facilitates feedback on the learning and monitoring throughout the productive cycle among technicians and producers.

The propagation of CATIE's cacao clones has traditionally been done by grafting, which requires the production of scions in large bags for subsequent grafting. During 2018, four trials were run to determine the effects of auxins, stake type and length, foliar area, shade types and substrate types on the rooting capacity of cuttings, achieving important progress. In 2019 we expect to consolidate the technique and start commercial production of cacao clones via the rooting of young tissue cuttings.



Outreach

CATIE joined the Cacao Committee of Central America and the Dominican Republic (SICACAO), a regional platform created in 2018, in order to promote initiatives that affect the policies of the Central American countries.

At the same time, in countries such as Honduras, Costa Rica, Nicaragua, Panama and Cuba, CATIE supported governments and the livestock sector in designing public policies and participating in governance spaces for the development of sustainable, low-carbon livestock production. In Costa Rica, CATIE supported the implementation of the livestock production NAMA. In Honduras and Nicaragua, the institution focused on designing a document for the national sustainable livestock strategy; while in Panama the ANAGAN breeders' association was supported in designing the technical sheet for the NAMA technical team. Finally, in Cuba, an inter-institutional group was supported in the development of a low carbon strategy document for the livestock production sector.

The Government of Costa Rica declared the conservation of genetic resources in the long-term public interest through executive decree number 002-2018-MAG. In the context of this declaration, the Ministry of Agriculture and Livestock (MAG) made a transfer of money to CATIE for the conservation of orthodox seeds in the cold chamber that the institution maintains.



Success story

The family of Karen Ledezma and Freddy Ruiz lives in Upala, Alajuela, Costa Rica and they have been growing cacao for eight years. They did not have experience, however, when seeing the plantations of their neighbors, they were interested in starting, so they approached the Association of Cocoa Producers where both, especially Karen, began training at the Field Schools in plantation management and grafting processes. After training, they planted a small plot with the clones selected by CATIE and thanks to their good performance and enthusiasm, they expanded the planting to other areas of their farm using grafts with material available on their farm. Due to the good management of their plantations, in 2015 their cooperative selected them to establish a clonal garden, as part of the project supported by the National Institute for Cooperative Development (INFOCOOP) and CATIE, which is already in production and is a source of buds for the distribution of improved genotypes.



Freddy Ruiz and Karen Ledezma are very satisfied with the production on their farm, mainly clones such as CATIE-R6, and they thanked CATIE for all the support they have received through different projects.



Partners

PROFAFOR Latin America (Face Program of Forestation of Ecuador SA) • United States Department of Agriculture (USDA), USA • MARS Inc, USA • LINDT, Switzerland • Heifer International, United States • Penn State University, United States • Cirad, Mesoamerican Scientific Platform of Perennial Crops (PCP) • Rural Development Agency, South Korea • GAIA Artisan Coffee, Costa Rica • Colombian Agricultural Research Corporation (AGROSAVIA), Colombia • National Institute of Agricultural Research (INIA), Uruguay • National Institute of Agricultural Innovation (INIA), Peru • Autonomous University of Chiapas (UNACH), Mexico • Regional University Center of the Atlantic Coast (CURLA), Honduras • National Agricultural University (UNA), Nicaragua



Publications

- Avelino, J; Allinne, C; Cerda, R; Willocquet, L; Savary, S. 2018. Multiple-Disease System in Coffee: From Crop Loss Assessment to Sustainable Management (en línea). Annual Review of Phytopathology 56:611-635. Consultado 18 feb.2018. Disponible en <https://www.annualreviews.org/doi/full/10.1146/annurev-phyto-080417-050117>
- Cárdenas, A; Moliner, A; Hontoria, C; Schemthanner. 2018. Analysis of land-use/land-cover changes in a livestock landscape dominated by traditional silvopastoral systems: a methodological approach (en línea). International Journal of Remote Sensing 39(14):4684-4698. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1080/01431161.2018.1463116>
- Cárdenas, A; Moliner, A; Hontoria, C; Muhammad, I. 2018. Ecological structure and carbon storage in traditional silvopastoral systems in Nicaragua (en línea). Agroforestry Systems. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1007/s10457-018-0234-6>
- Casasola, F; Villanueva, C; Ibrahim, M; Lombo, F. 2018. Tecnologías relevantes para la gestión integral del estiércol en fincas ganaderas de Costa Rica. Serie técnica.
- Chain-Guadarrama, A; Martínez-Rodríguez, MR; Cárdenas, JM; Vilchez-Mendoza S; Harve, CA. 2018. Ecosystem-based Adaptation by smallholder basic grain farms in Guatemala and Honduras (en línea). Agronomía Mesoamericana 29(3):571-583. Consultado 18 feb.2018. Disponible en http://www.scielo.sa.cr/scielo.php?script=sci_arttext&pid=S1659-13212018000300571&lng=pt&nrm=iso&tlng=pt
- Cornejo, OE; Yee, MC; Dominguez, V; Andrews, M; Sockell, A; Strandberg, E; Livingstone III, D; Stack, C; Romero, A; Umaharan, P; Royaert, S; Tawari, NR; Ng, P; Gutierrez, O; Phillips, W; Mockaitis, K; Bustamante, CD; Motamayor, JC. 2018. Population genomic analyses of the chocolate tree, *Theobroma cacao* L., provide insights into its domestication process (en línea). Communications Biology 1:1-12. Consultado 18 feb.2018. Disponible en <https://www.nature.com/articles/s42003-018-0168-6.pdf>
- González-Rojas, M; Murillo-Cruz, R; de Melo-Virginio-Filho, E; Ávila-Arias, C. 2018. Influencia de factores biofísicos y de manejo en el crecimiento de *Cedrela odorata* L. en asocio con café en Pérez Zeledón, Costa Rica (en línea). Revista Forestal Mesoamericana Kurú 15(36):46-58. Consultado 18 feb.2018. Disponible en <http://revistas.tec.ac.cr/index.php/kuru/article/view/3420/3117>
- Hontoria, C; Ibrahim, M. 2018. Ecological structure and carbon storage in traditional silvopastoral systems in Nicaragua (en línea). Agroforestry systems 20 (3):1-11. Consultado 18 feb.2018. Disponible en <https://link.springer.com/content/pdf/10.1007%2Fs10457-018-0234-6.pdf>
- Mata-Quirós, A; Arciniegas-Leal, A; Phillips-Mora, W; Meinhardt, LW; Motilal, L; Mischke, S; Zhang, D. 2018. Assessing hidden parentage and genetic integrity of the "United Fruit Clones" of cacao (*Theobroma cacao*) from Costa Rica using SNP markers (en línea). Breeding Science 68:545-553. Consultado 18 feb.2018. Disponible en www.jstage.jst.go.jp/article/jsbbs/68/5/68_18057/_pdf-char/en
- Moscoco, C; Villanueva, C; Dettelsen, G; López, J., 2018; Balance de carbono en fincas ganaderas de la región sur oriente de Guatemala; Serie técnica
- Padovan, MP; Brook, RM; Barrios, M; Cruz-Castillo, JB; Vilchez-Mendoza, SJ; Costa, AN; Rapidel, B. 2018. Water loss by transpiration and soil evaporation in coffee shaded by *Tabebuia rosea* Bertol. and *Simarouba glauca* dc. compared to unshaded coffee in sub-optimal environmental conditions (en línea). Agricultural and Forest Meteorology 248:1-14. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1016/j.agrformet.2017.08.036>
- Phillips-Mora, W; A. Mata-Quirós & A. Arciniegas-Leal, 2017. Generation of cacao clones with durable resistant against frosty pod rot (*Moniliophthora roreri* (Cif. & Par.) Evans et al.) In International Symposium on Cocoa Research (ISCR), Lima, Peru. 10 p.
- Sauvadet, M; Van den Meersche, K; Allinne, de Melo-Virginio-Filho, E; Chauvat, M; Becquer, T; Tixier, P; Harmand, JM. 2018. Shade tree species impacts on soil fauna and C, N, P cycles in Costa Rican organic and conventional coffee agroforestry systems In: Proceedings of the 20 th Nitrogen Workshop Coupling C - N - P - S cycles June 25-27, 2018 Rennes, France (en línea). 427-428. Consultado 18 feb.2018. Disponible en <http://agritrop.cirad.fr/588754/>
- Schnabel, F; de Melo-Virginio-Filho, E; Xu, S; Fisk, ID; Rouspard, O; Haggar, J. 2018. Shade trees: a determinant to the relative success of organic versus conventional coffee production (en línea). Agroforest Systems 92(6):1535-1549. Consultado 18 feb.2018. Disponible en <https://link.springer.com/content/pdf/10.1007%2Fs10457-017-0100-y.pdf>
- Sepúlveda N., Somarriba E., Ayerdis R., Cornelius J., Castro J., 2018. Traditional fruit and timber trees as a contribution to the livelihoods of rural families in the Los Pueblos Blancos region of Nicaragua (Los árboles frutales tradicionales y maderables como contribución a los medios de vida de las familias rurales en la región de los Pueblos Blancos, Nicaragua). Síntesis para decisores Policy Brief ISSN 1659-3480 p. 1-4
- Somarriba, E., Orozco-Aguilar, L., Cerda, R., López-Sampson, A., 2018. Analysis and design of the shade canopy of cocoa-based agroforestry systems (en línea). In Archiving sustainable cultivation of cocoa. p. 469-499. Consultado 18 feb.2018. Disponible en http://repositorio.bibliotecaorton.catie.ac.cr/bitstream/handle/11554/8916/Analysis_and_design_of_the_shade.pdf?sequence=1&isAllowed=y
- Villanueva, C; Casasola, F; Dettelsen, G. 2018. Potencial de los sistemas silvopastoriles en la mitigación al cambio climático y en la generación de múltiples beneficios en fincas ganaderas de Costa Rica (en línea). (Serie técnica). Boletín Técnico no.87. Consultado 18 feb.2018. Disponible en http://repositorio.bibliotecaorton.catie.ac.cr/bitstream/handle/11554/8729/Potencial_de_los_sistemas_silvopastoriles.pdf?sequence=7&isAllowed=y

Forests, Biodiversity and Climate Change

The work of the Forests, Biodiversity and Climate Change Program (PBBCC) encompasses five main lines: climate change mitigation and adaptation in the forestry sector; forest and landscape restoration; biodiversity conservation strategies; forest ecology applied to multiscale forest management, and policies and governance for multi-scale forests, biodiversity and water management, with an emphasis on the consolidation of participatory platforms. The program ensures the key contribution that CATIE makes to regional efforts to restore degraded lands, innovating in the construction of effective relationships between forest producers and the private financial sector. It hosts a new Watershed and Water Security Unit that consolidates CATIE's leadership in this issue of paramount importance for the vulnerable populations of Central America and the Caribbean, as well as a unique long-term research program in the region on the effects of drivers of global change in tropical forests.

All the above is developed in the context of an enviable scientific and technical interdisciplinary capacity to meet the demands of countries faced with the serious threat of climate change. The PBBCC contributes new tools to combat this threat, with support to the countries in complying with their obligations to international agreements on climate and with innovative research on the degradation and restoration of ecosystem services in this context. The program was strengthened during 2018 through the consolidation of the Chair for Ecosystem Management under the leadership of Dr. Miguel Cifuentes and it interacts with multiple partners from the international centers of CGIAR to the rural and urban municipalities of Central American countries. His collaboration with the Center for International Cooperation in Agronomic Research for Development (Cirad) of France has been consolidated with the incorporation of two researchers from the Center into his professional team. Finally, the geographical scope of his work is, truly, the subcontinent of Latin America and the Caribbean.



Strategic actions

● Policies and participatory governance of territories: the Ibero-American Model Forest Network (RIABM)

By having the presidency and management of the RIABM, in 2018 CATIE evaluated a proposal for Model Forests in Brazil, an affiliate of the RIABM. The final approval of the proposal is expected to occur in May 2019.

The proposed model forest area of action has 2.5 million hectares. The model forest covers part of the states of Bahia and Espírito Santo and its focus is on the conservation and restoration of natural forests of the Atlantic Forest, a biome of global importance for the conservation of biodiversity and the ecosystem services it provides, in that only 11% of the original forest cover remains.



Forest restoration of degraded lands

The agreement with the *National Institute of Forest Sciences* (NIFOS) of the Republic of Korea was renewed, in order to continue the comparative research between the landscapes of Costa Rica and those of the Republic of Korea.

Through the Climate Technology Centre & Network (CTCN), CATIE provided technical assistance to Chile's Ministry of Environment on governance platforms for the restoration of forests and landscapes in areas affected by fires, based on participatory analysis of the governance context for the regions of Maule and O Higgins.

Support was also given to GIZ, an agency of the German Federal Government, to hold the National Course on Ecosystem and Landscape Restoration given in the Dominican Republic by the REDD+ Landscape program.

The execution of the project Development of Sustainable Management Models in Secondary Forests and its Nexus with the Private Financial Sector was continued, establishing demonstration areas in El Salvador, Guatemala, Honduras and Costa Rica. The project is financed by the IKI program of the German government and its aim is to develop sustainable models to promote the management of secondary forests as productive, relevant and habitual ecosystems present throughout Latin America. For this, the project promotes training in the topic of business models and in 2018 it promoted a forestry business roundtable in Costa Rica, as well as a call for business ideas. In addition, the project sponsored the publication of a guide for ecological monitoring in secondary forest management.

Also, in the context of this project, the structuring of a business model was achieved, financed by the impact fund Forestry and Climate Change Fund (FCCF), which brings together 19 forest owners from the Petén department in Guatemala, and a grassroots non-governmental organization (NGO) to develop a forestry business. This consists of a sustainable forest management project that aims to develop a value chain with various actors in the sector, based on a partnership management business model.

On the other hand, CATIE's leadership in the region in initiatives to restore degraded lands was underscored by the scientific publications for the year. A student of CATIE's Masters in Management and Conservation of Tropical Forests and Biodiversity published two articles in international journals on his research on ecosystem processes under different technical approaches to forest restoration, in collaboration with researchers from the Organization of Tropical Studies. In addition, researchers from the PBBCC and the aforementioned master's program participated in an important article on forest restoration through secondary natural succession, published in *Nature Ecology and Evolution*.

Within the framework of the global processes for degraded land restoration that responds to international initiatives such as the Bonn Challenge and the New York Declaration on Forests, CATIE has prominent participation in the project, which is also financed by IKI to support the 20x20 Initiative. This project is led by the World Resources Institute (WRI) and it also participates in the International Center for Tropical Agriculture (CIAT).

Likewise, it has been possible to support policies and institutions for the restoration of landscapes in Mexico, Guatemala, Costa Rica, Colombia, Peru and Chile. CATIE participated in various workshops, training and processes to analyze and define policy instruments in these countries.

Mitigation and adaptation to climate change and other drivers of global change

CATIE's work on climate change is carried out at global, regional and national levels, focusing on strengthening work with ecosystem services, blue carbon, cities, wetlands, technology transfer and adaptation-mitigation synergies (AMS), among others.

Global scope: the institution is part of the International Blue Carbon Science Working Group. In addition, one of the CATIE researchers is the lead author of the Special Report on the Ocean and the Cryosphere of the IPCC and other researchers are reviewers of special IPCC reports. Top notch scientific work has allowed the institution to publish the results of the work done with blue carbon in the prestigious international journal *Nature Climate Change*. In addition, a PBBCC specialist is a member of the Scientific Council on Climate Change of Costa Rica.

Regional and national scope: the technical phase of the sustainable landscapes component of the USAID Regional Climate Change Program (PRCC) has been concluded. Through it, technical assistance was provided for the development of national REDD+ strategies and monitoring, reporting and valuation (MRV) systems for REDD+ throughout the region, training government staff and local partners, producing technical manuals and strengthening political processes. The PBBCC maintains a technical relationship with the Inter-American Development Bank (IDB) to promote the transfer of monitoring technologies for the forestry sector throughout Latin America, with work especially in Brazil, Costa Rica and the Dominican Republic.



In El Salvador, technical assistance with the World Bank for the construction of important inputs for the country's national REDD+ strategy and its National Inventory of Greenhouse Gases (INGE) was concluded. In Costa Rica, cutting-edge issues are explored in “non-traditional” ecosystems –cities, paramos, coasts and wetlands– focusing on synergies between mitigation and adaptation to climate change, vulnerable populations, loss of ecosystem functionality and services and fire management; issues that will all be critical in the conservation and economic development of society in the coming decades.

Finally, a strong investment was made in technological infrastructure that will allow the exploration of new topics and keep the institution at the forefront of processes related to climate change mitigation and adaptation. For example, the cluster of processing servers was reconfigured and put online, the most modern geospatial infrastructure available for research and teaching institutions was installed, a new geospatial visualization platform was launched (<https://storymaps.catie.ac.cr/>) and several last generation drones were purchased.

Conservation strategies for forests, biodiversity and ecosystem services

The work on conservation strategies focuses on the management of protected areas and biological corridors and it has a strong emphasis on combating the drivers of global change. In Costa Rica, the process to develop ecological integrity indicators and their respective monitoring protocols at the local level for terrestrial and inland waters in 32 protected wild areas of the country was initiated. In addition, a project was finalized that developed participatory proposals for the creation and/or expansion of three protected wild areas with more than 50,000 ha, of which 78% corresponds to forests of national importance. Both projects were financed by the II United States-Costa Rica Debt Swap for Nature.

In Honduras, participation in the Project for the Consolidation of the Subsystem of Marine Protected Areas on the north coast was concluded. Funded by the Global Environment Facility (GEF), this project consisted of 43 technical products to consolidate the subsystem, improve the management effectiveness of individual protected areas and generate financial mechanisms that will contribute to the sustainability of protected areas over the long term.

Together with GIZ, the Punta Cana Group Foundation, Counterpart International and the Global Nature Fund, CATIE is participating in the Biodiversity and Business project, which aims to support the tourism sector with the restoration and protection of marine and coastal biodiversity in the Caribbean Sea. With funds from the European Union, this project focuses its actions on the Dominican Republic, Haiti and Honduras. Among the actions implemented by CATIE, the Cayos Cochinos Protected Area was identified as a

priority area for the restoration of marine ecosystems. Together with the Punta Cana Group Foundation, local communities were trained and coral gardens were established that will conserve marine diversity and serve as areas for specialized recreational diving.

CATIE is a leading institution in the region in efforts to ensure the resilience of priority landscapes through biological corridors. The Biological Corridor Network for Latin America and the Caribbean (CoBioRed) is a learning and knowledge management community that is coordinated by CATIE, consisting of a wide variety of actors. The network has the support of different organizations that jointly direct efforts to articulate biological corridor initiatives from the local to the national and throughout the Latin America and Caribbean region.

Once again, CATIE's leadership is reflected in its scientific and technical publications. Two examples stand out; the first of them, a CATIE researcher who edited a special issue of the international journal *Biotropica*, which was published in 2018 and consists of eleven articles that report on long-term research linking the phenology of forests to plant-animal interactions that contribute to forest resilience, within the framework of climate variation and change. The second is a publication that CATIE prepared through the Regional Climate Change Program of USAID, about an innovative tool to prioritize and implement measures that generate synergies between climate change adaptation and mitigation.



Watershed management and water security

In this line of work of vital importance for the countries of the region, CATIE targeted its actions on Haiti, one of the world's most vulnerable nations to global climate change. During 2018, the project Sustainable Reduction of Food Insecurity in the Communes of Haut Artibonite was implemented, which addresses the structural causes and problems of vulnerability by improving the capacity for resilience of vulnerable populations. The project generated baseline biophysical and socioeconomic information and implemented participatory processes that contributed to identify aspects of resilience to climate change in these territories.

In terms of innovation, CATIE expanded its use of the Resource Investments Optimization System (RIOS) software tool. Based on experience in 2017 with the Project WaterClima-LAC (coastal zone management), it was possible to incorporate this learning into the degree course theses and postgraduate courses during 2018. CATIE also worked with isotope hydrology, a system used to analyze aquifer recharge and groundwater renewal processes. This innovative tool was applied in El Salvador, in the Bajo Lempa watershed.

New projects

Water Harvesting II: Financed by the Swiss Agency for Development and Cooperation (COSUDE), the project will support the management and administration of water harvesting and capture infrastructure in 10 municipalities of Nicaragua's Dry Corridor.

Investment Program for the Restoration of Priority Watersheds -Procuencas in Panama: Financed by MiAmbiente, the project involves the Watersheds and Water Security Unit in the design of the project's monitoring and evaluation system.

Management Plan for the Lake Atitlán Basin: Financed by the Authority for the Sustainable Management of Lake Atitlán and its environs, the project will facilitate planning in the Atitlán basin with an emphasis on climate change and sustainability.



Capacity building

CoBioRed

In 2018, this network held its **XII Latin American Symposium on Biological Corridors** within the framework of the Annual Congress of the Mesoamerican Society for Biology and Conservation. The symposium provided an opportunity for the national coordinators of the Mesoamerican and Caribbean Biological Corridors to hold their annual meeting to monitor the 2020 Master Plan.

Water resources

CATIE organized and implemented the **“Tri-national Forum on Integrated Water Resource Management - Colombia, Costa Rica and Panama: progress, scope, challenges, policies and innovative practices.”** A total of 44 women and 37 men participated in this forum, in which participants were able to update their knowledge and establish networks and opportunities for collaboration between academics, state institutions, civil society, students, the private sector, etc.

IAMFN

The network organized a seminar in Guatemala to discuss guidelines for planning and monitoring restoration processes at territorial level. The purpose of the seminar was to contribute to territorial management processes and support the governments associated with the Ibero-American Model Forest Network (IAMFN). In addition, participants prepared a **2018-2022 Strategic Plan** that will primarily assist the network's members, i.e. the 15 member countries, the 34 model forests of Ibero-America and their partner organizations.

Initiative 20x20

In the context of this Initiative, the **Third International Course on Restoration of Forest Landscapes** was held with support from the Regional Forest Landscape Restoration Program in Central America and the Dominican Republic (REDD+ Landscape) supported by GIZ. More than 30 people from different countries and institutions of the continent participated in the event. The course not only served to build capacity to guide restoration efforts in the region (policies, standards, projects, allocation of resources), but also to forge closer ties and create opportunities for interinstitutional interaction on these topics.





Innovative tools and methodologies

Standards for planning and monitoring restoration at the landscape level were developed through a thesis research project carried out by a student of CATIE's Master's program. The standards were implemented in four impact territories within Model Forests in which restoration efforts are underway in Costa Rica (Chorotega Model Forest), Colombia (Risaralda Model Forest) and Peru (Pichanaki and Villa Rica Model Forests).

The issue of Blue Carbon is becoming increasingly important in the region and related actions are being consolidated. CATIE produced a regional manual on methods for quantifying blue carbon in mangroves and a policy brief for the government of El Salvador. Together with Conservation International (CI), CATIE prepared a study for the Costa Rican Ministry of Environment and Energy (MINAE) for the appraisal of ecosystem services provided by mangroves in the Gulf of Nicoya, in Costa Rica. This was the first study of its type in the world, given the innovative combination of methods used. The Blue Carbon actions with the government of Costa Rica will continue in 2019 with the construction of the National Blue Carbon Strategy. Another important contribution related to mangroves has been the formulation of a mangrove conservation strategy for the Gulf of Nicoya of Costa Rica.

CATIE also supported the Dominican Republic's Ministry of the Environment and Natural Resources in completing a National Forest Inventory, through a forest cover inventory in non-forest land (cocoa, coco and mango plantations, scrubland, pastures, etc.). The work involved the design and implementation of a field inventory and calculations of the biomass and carbon accumulated in these systems.



Outreach

Through its participation in Costa Rica's National Commission of Forest Sustainability (CNSF), CATIE helped to promote a decree setting official standards for the management of the country's secondary forests. This is expected to provide a valuable tool for promoting restoration activities and the Center will continue to promote the use of this tool.

In Guatemala, CATIE has made a significant contribution to the definition of priorities and criteria for allocating resources for landscape restoration. In this country, it has provided extensive support in training human resources together with the United Nations Food and Agriculture Organization (FAO), the GIZ agency, the United States Forest Service (USFS), the International Union for the Conservation of Nature (IUCN) and IKI.

In Mexico, CATIE has supported identification of restoration initiatives throughout the country and has promoted interinstitutional discussions on the possibility of defining a national strategy.

In Costa Rica, the participation of CATIE specialists was key in defining a national landscape restoration strategy. That process is continuing in the context of our participation in the National Commission of Forest Sustainability (CNSF).

In Chile and Peru, CATIE contributed to an analysis of opportunities for landscape restoration at the national level and, after a lengthy negotiation process, managed to integrate efforts by the Ministry of Environment, the Ministry of Agriculture, the National Forest Corporation (CONAF) and the Forestry Institute (INFOR) to organize the first National Workshop on Restoration Opportunities and Challenges at Landscape Level. Finally, CATIE is a member of Colombia's National Landscape Restoration Group and has participated in discussions to develop a national plan.



Success story

The International Course on Diversified Management of Natural Tropical Forests: the most established course of its kind in the world.

In 2018, CATIE organized the thirtieth edition of this course, making it the longest- running forest management course at the global level. Since the first course was held in 1987, and to the present day, it has trained 581 people from several regions of the world (309 from Central America and the Caribbean, 212 from South America, 24 from North America, 21 from Europe and five from Africa).

However, the course has evolved in terms of its content, since the initial version focused more on the silvicultural aspects of forest management, while the current course covers the topics related to the diversified management of goods and services provided by forests, taking into consideration the change of paradigms linked to climate change, landscape restoration and governance for territorial management.



Partners

CIRAD • World Resources Institute (WRI) • Ibero-American Network of Model Forests (RIABM) • National Institute of Forest Research (NIFOS), Republic of Korea • University of Idaho • Inter-American Development Bank • Swiss Agency for Development and Cooperation (COSUDE) • International Union of Forest Research Organizations (IUFRO) • the German government's International Climate Initiative (IKI) • Ministry of Environment and Natural Resources (MARN) of El Salvador • Wetlands Program - National System of Conservation Areas-Costa Rica • Institute of Forest Conservation and Protected Areas of Honduras (ICF) • Municipality of Curridabat-Costa Rica • International Center for Tropical Agriculture (CIAT) • United Nations Food and Agriculture Organization (FAO) • Center for International Forestry Research (CIFOR).



Publications

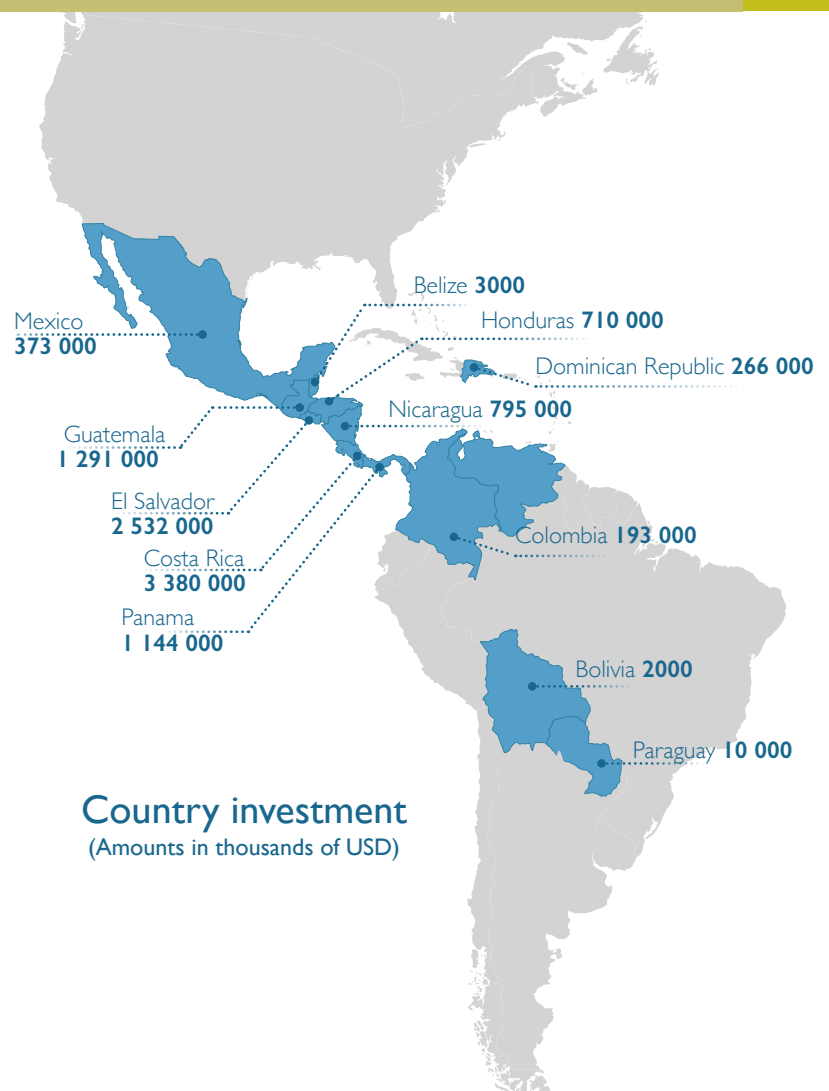
- Carreño-Rocabado, G; Caicedo, W; Finegan, B; Cifuentes, M; Ordoñez, J. 2018. Tree species diversity and carbon stock of trees on farms in the Nicaragua-Honduras Sentinel Landscape. Harvard Dataverse 1. Consultado 18 feb.2018. Disponible en <https://doi.org/10.7910/DVN/LRP2MV>
- De Sousa, KFD; Casanoves, F; Sellar, J; Ospina, A; Suchini-Ramírez, JG; Aguilar, A; Mercado, L. 2018. How climate awareness influences farmers' adaptation decisions in Central America? *Journal of Rural Studies* 64:11-19. Consultado 18 feb.2018. Disponible en <http://repositorio.bibliotecaorton.catie.ac.cr/handle/11554/8949>
- Gei, M; Rozendaal, DMA; Poorter L; Bongers F., Sprent JI; Garner, MD; Mitchell-Aide, T; Andrade, JL; Balvanera, P; Becknell, JM; Brancalion, PHS; Cabral, GAL; Gomes-Cesár, R; Chadzon, RL; Cole, RJ; Dalla-Colleta, G; De Jong, B; Denslow, JS; Dent, DH; DeWalt, SJ; Dupuy, JM; Durán, SM; Do Espiritu Santo, MM; Fernandes, GW; Ferreira-Nunes, YR; Finegan, B; Granda-Moser, V; Hall, JS; Hernández-Stefanoni, JL; Junqueira, AB; Kennard, D; Lebrija-Trejos, E; Letcher, SG; Lohbeck, M; Marín-Spiotta, E; Martínez-Ramos, M; Meave, JA; Menge, DNL; Mora, F; Muñoz, R; Muscarella, R; Ochoa-Gaona, S; Orihuela-Belmonte, E; Ostegart, R; Peña-Claros, M; Pérez-García, EA; Piotta, D; Reich, PB; Reyes-García, C; Rodríguez- Velazquez, J; Romero-Peréz, IE, Sanaphre-Villanueva, L; Sánchez-Azofeifa, A; Schwartz,NB; Silva-De Almeida, A; Almeida-Cortez, JS; Silver, W; De Souza-Moreno, V; Sullivan, BW; Swenson, NG; Uriarte, M; Van Breugel, M; Van der Wal, H; Magalhaes-Veloso, MD; Vester, HFM; Guimaraes-Vieira, IC; Zimmerman, JK; Powers, JS. 2018. Legume abundance along successional and rainfall gradients in Neotropical forests (en línea). *Nature ecology & evolution* 2(7):1104-1111. Consultado 18 feb.2018. Disponible en <https://www.nature.com/articles/s41559-018-0559-6>
- Godoy, C; Cifuentes-Jara, M. 2018. Estrategias locales de desarrollo sostenible bajo cambio climático (ELDECC) y generación de sinergias entre adaptación y mitigación del cambio climático (SAM) en territorios de Centroamérica (en línea). Turrialba, CATIE. 56 p. (Serie técnica). Boletín técnico no. 85. Consultado 18 feb.2018. Disponible en <http://repositorio.bibliotecaorton.catie.ac.cr/handle/11554/8720>
- Kauffman, J.B; Arifanti, VB; Bernardino, AF; Ferreira, TO; Murdiyasar, D; Cifuentes, M; Norfolk, J. 2018. And details for land-use carbon footprints arise from quantitative and replicated studies (en línea). *Frontiers in Ecology and the Environment*. 16(1):12-13. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1002/fee.1749>
- Medellín, C; Corrales, L; Cifuentes-Jara, M; Imbach, P; Brenes, C. 2018. Herramienta para la priorización e implementación de medidas que generan sinergias entre adaptación y mitigación del cambio climático: un enfoque basado en servicios ecosistémicos (en línea). Turrialba, Costa Rica, CATIE. 82 p. (Serie técnica). Manual técnico no. 142. Consultado 18 feb.2018. Disponible en <http://repositorio.bibliotecaorton.catie.ac.cr/handle/11554/8846>
- Rovai, AS; Twilley, RR; Castañeda-Moya, E; Riul, P; Cifuentes-Jara, M; Manrow-Villalobos, M; Horta, PA; Simonassi, JC; Fonseca, AL; Pagliosa, PR. 2018. Global controls on carbon storage in mangrove soils (en línea). *Nature Climate Change* 8:534-538. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1038/s41558-018-0162-5>
- Salazar JCS; Bieng, MAN; Melgarejo, LM; Di Rienzo, JA; Casanoves, F. 2018. First typology of cacao (*Theobroma cacao* L.) systems in Colombian Amazonia, based on tree species richness, canopy structure and light availability (en línea). *Plos One* 13(2):1-20. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1371/journal.pone.0191003>
- Salazar, JCS; Melgarejo, LM; Casanoves, F; Di Rienzo, JA; DaMatta, FM; Armas, C. Photosynthesis limitations in cacao leaves under different agroforestry systems in the Colombian Amazon (en línea). *Plos One* 13:1-13. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1371/journal.pone.0206149>
- Sanderman, J; Hengl, T; Fiske, G; Solvik, K; Adame, M; Benson, L; Bukoski, J; Carnell, P; Cifuentes-Jara, M; Donato, D; Duncan, C; Eid, E; Zu Ermgassen, P; Ewers Lewis, C; Glass, L; Gress, S; Jardine, S; Jones, T; Macreadie, P; Nsombo, E; Rahman, Md. M; Sanders, C; Spalding, M; Landis, E. 2017. A global map of mangrove forest soil carbon at 30 m spatial resolution (en línea). *Environmental Research Letters* 13. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1088/1748-9326/aabe1c>
- Sanfiorenzo, A; Sanfiorenzo, M; Vargas, R; Waits, L; Finegan, B. 2018. Potential pollinators of understory populations of *Symphonia globulifera* in the Neotropics (en línea). *Journal of Pollination Ecology* 22(1):1-10. Consultado 18 feb.2018. Disponible en <http://pollinationecology.org/index.php?journal=jpe&page=article&op=view&path%5B%5D=405>
- Welsh K., Boll J., Sánchez Murillo R., Rouspard O. Isotope hydrology of a tropical coffee agroforestry watershed: Seasonal and event-based analyses(en línea). *Hydrological Processes* 32(13):1965-1977. Consultado 18 feb.2018. Disponible en <https://doi.org/10.1002/hyp.13149>





Addressing regional demands

CATIE's mandate focuses on supporting the sustainable management of agriculture and natural resources in Latin America and the Caribbean. We work in 13 member countries and our Country Offices and institutional links focus on meeting the demands of each country with different levels of impact. Our work includes training, project implementation and consultancy services, and technical assistance, among other actions.



PANAMA



Major projects and consultancies

Strategic Plan for the Altitudinal Corridor of Gualaca: This plan aims to mobilize resources and organize investments in the area with the participation of diverse stakeholders.

Strengthening partners of the Small Donations Program: The aim was to promote the implementation of new projects and forge collaborative links with organizations involved in similar work.

Strengthening PROCUENCAS: CATIE organized 120 workshops on topics such as farm planning, silvopastoral systems, plantation management and others; 95% of these workshops took place with producers in five priority watersheds in Panama. In addition, a monitoring and evaluation system was developed for topics related to the Alianza por el Millón (Million Hectare Reforestation Alliance) The aim of this public-private partnership is to reforest one million hectares over the next 20 years, in order to reduce deforestation rates in natural forests and contribute to carbon capture.

Platforms in which CATIE participates

- ▶ Technical Committee of the National Climate Change Plan for the Agricultural Sector
- ▶ Global Water Partnership- Panama (GWP)
- ▶ International Center for Sustainable Development (CIDES)
- ▶ National Commission for the Area-based Rural Development (technical assistance platform)

GUATEMALA



Major projects and consultancies

Territorial co-management for the conservation and sustainable management of the Acatenango volcanic complex: strengthening the Municipal Environmental Management Unit (UGAM) for conservation and restoration actions; ecotourism management; and community tourism; knowledge management; biodiversity conservation and ecotourism; strengthening governance and conflict resolution.

Climate-smart production systems based on silvopastoral systems in 15 municipalities of southeast Guatemala: implemented in 30 model farms to generate information demonstrating the contribution of silvopastoral systems and best livestock practices to climate change adaptation and mitigation. A report was prepared on the farms' carbon balance to identify farm designs that present a positive carbon balance (carbon removal greater than emissions) and a guide to the participatory design of farm plans with silvopastoral systems and prioritization of good livestock practices.

National Information Platform for Nutrition (PiNN)

The Secretariat for Food Security and Nutrition (SESAN) and the relevant sectors have improved their capacity to operate and maintain the platform. In addition, they are being strengthened in order to monitor the progress made in achieving the national goals of reducing chronic malnutrition and monitoring multisector investments in nutrition. They are also improving capacity to use information and evidence for the design and improvement of multisector nutrition policies and programs.

Sixth National Report: Compliance with the Agreements of the Convention on Biological Diversity: CATIE provided technical support in the preparation of this report to the National Council for Protected Areas (CONAP) and the United Nations Development Program (UNDP).

Project- Adapting to Climate Change in Guatemala's Dry Corridor: The baseline for this project was prepared in eight municipalities.

Platforms in which CATIE participates

- ▶ The Guatemalan Climate Change Sciences System (SGCCC); Technical Committee of the Community Forests Development Fund; National Forest and Landscape Restoration Roundtable; Technical Group for Research and Rural Extension; Group for Promotion of Sustainable Cattle Ranching; National Food and Nutrition Security Information System (SIINSAN); Organizing Committee of the Eleventh National Forestry Congress; Agro-climatic Technical Roundtable of Chiquimula.

HONDURAS



Major projects and consultancies

In Honduras, seven proposals were presented of which five were approved for the sum of USD 9.43 million at the consortium level. CATIE completed five consultancies with the Ministry of Environment and three agreements were signed with two private institutions and one with the Ministry of Education..

Platforms in which CATIE participates

- ▶ CATIE has signed an agreement with the Honduran National Federation of Farmers and Ranchers (FENAG), an organization with nearly one million members. It is also a board member of the Global Water Partnership (GWP) and works very closely with the ministries of Agriculture and Livestock, Environment, Education and with the Institute of Forest Conservation, the Directorate of Science and Technology (DICTA) and the Honduran Coffee Institute (IHCAFE). With its innovative educational approaches, CATIE leads the country's network of 23 universities in the Interinstitutional Committee of Environment Sciences (CICA).

EL SALVADOR



Major projects and consultancies

Regional Climate Change Program (RCCP):

This initiative is coordinated from El Salvador and financed by the United States Agency for International Development (USAID). CATIE built capacity in climate information for adaptation and the environment in coordination with the Ministry of the Environment and Natural Resources (MARN).

Development project for sustainable forest models and links to private funding for secondary forests:

Financed by the International Climate Initiative (IKI), the project is being implemented in coordination with the General Directorate of Forest Management, Watersheds and Irrigation of the Ministry of Agriculture, Livestock and Food. Its objective is to strengthen the capacity of institutions and producers to manage secondary forests in the Department of Morazán.

WaterClima Project: This initiative was financed by the European Union. Its results focused on strengthening public-private sector dialogue and cooperation for the management of coastal

areas and the design of technical and financial mechanisms for managing coastal areas, local development, capacity building, dissemination and networking. CATIE worked with public and private sector institutions in the departments of La Paz, San Vicente and Usulután.

Central American Program for Integrated Coffee Rust Management (PROCAGICA):

An initiative financed by the European Union and implemented by the Inter-American Institute for Cooperation on Agriculture (IICA). CATIE established 50 research parcels with coffee agroforestry systems in the departments of La Paz, San Miguel and Usulután, in coordination with IICA and the National Center for Agricultural and Forestry Technology "Enrique Álvarez Córdova" (CENTA).

Diploma program in Climate Financing:

28 professionals from the public sector and non-governmental organizations received training to gain access to climate funding. This is an initiative of the Vice-Ministry for Development Cooperation (VMCD) and MARN, implemented with support from the United Nations Development Program (UNDP).

Platforms in which CATIE participates

- ▶ CATIE participates in the Roundtable for International Cooperation on Agriculture, a group of 21 institutions (donors and international organizations) working to coordinate and support the national agricultural development agenda.

NICARAGUA



Major projects and consultancies

Water Harvesting Project: Successfully completed this project through technical assistance to the Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA). Around 1700 families adopted water harvesting technology and increased their food availability by 50% and production by 10%.

New project: A new project for USD 6.4 million was implemented with support from the Swiss Agency for Development and Cooperation (COSUDE), the CGIAR research program on Climate Change, Agriculture and Food Security (CCAFS) and Bioversity International..

Platforms in which CATIE participates

- ▶ Collaborative Management Committee for Macizo de Peñas Blancas
- ▶ National Agricultural Research and Innovation System
- ▶ Articulating Science, Rural Development and Education in Nicaragua
- ▶ National Coffee Roundtable
- ▶ National Cacao Roundtable
- ▶ World Soil Association
- ▶ National Watersheds and Water Network
- ▶ GESCON knowledge management Network
- ▶ The Latin American Network of Rural Extension Services

MEXICO



Major projects and consultancies

BioPaSOS Project: CATIE's implementation of the project "Promoting biodiversity conservation through climate-smart agrosilvopastoral practices in landscapes dominated by livestock in three regions of Mexico", known as BioPaSOS, has impacted more than 900 livestock farming families in the project's intervention areas located in the states of Jalisco, Campeche and Chiapas.

Innovation Project for the Monitoring, Reporting and Verification System for National REDD+: A graphical user interface was developed to generate consultations and reports for the different components of Mexico's National Forest Monitoring System, e.g. field data, remote sensors, community monitoring and biodiversity; the implementation and institutionalization of the MAD-Mex software, through the calibration of this tool to improve detection and management of changes in forest coverage; and adoption of the use, development and administration of this tool within the National Forest Commission (CONAFOR).

Platforms in which CATIE participates

- ▶ CATIE cooperates actively and closely with Mexican state and federal organizations:
- ▶ Implements the BioPaSOS project jointly with the Inter-American Institute for Cooperation on Agriculture (IICA) with support from the Federal Government, through active coordination of the National Biodiversity Commission (CONABIO) and the Secretariat of Agriculture and Rural Development (SADER).
- ▶ Participates in various platforms involving a large number of research, education and development institutions with similar objectives, including: the Emissions Reduction Initiative (IRE); the learning platform in El Tablón watershed; the Thematic Network in Agroforestry Systems of Mexico (REDSAM); the Network for Research and Technological Innovation for Tropical Cattle (REDGATRO); and the Virtual Center of Excellence in Forest Monitoring.

COLOMBIA



Major projects and consultancies

New proposals: CATIE submitted nine proposals, one of which has been approved to begin in February 2019.

Agreements: Eleven agreements were signed (five with the public sector and six with the private sector).

Platforms in which CATIE participates

- ▶ CATIE forms part of the Sustainable Livestock Group and of the National Advisory Group on Restoration Roundtable. During 2018, its actions focused on highlighting the institution in the country, with national and regional actors, and it established strategic partnerships for cooperation and the development of research and education proposals for development and management in the coming years. These partnerships involve institutions such as the Ministry of Environment, Ministry of Agriculture, technical units attached to the ministries, such as the Rural Agricultural Planning Unit (UPRA), the National Geographic Institute (IGAC) and private sector partnerships such as the Natura Foundation.

DOMINICAN REPUBLIC



Major projects and consultancies

Agreements: CATIE signed nine cooperation agreements (five with the public sector and four with the private sector).

Consultancies: Three consultancies were implemented.

New proposals: CATIE negotiated eleven project and training proposals with the Ministries of Agriculture and the Environment.

Capacity building: 99 technicians received training on different topics.

Platforms in which CATIE participates

CATIE coordinates actions and is closely associated with four ministries and nine decentralized institutions of the agrofood and forestry sector, nine private sector institutions and 10 universities. It also forms part of six discussion groups: The Water Roundtable coordinated by the Ministry of Planning

- ▶ The Board of Deans and Directors of Agrofood and Forestry Courses
- ▶ Donors Group coordinated by the Ministry of Agriculture
- ▶ Donors Group coordinated by FAO and IICA
- ▶ Mixed Binational Haiti-Dominican Republic Commission coordinated by the Ministry of Foreign Relations
- ▶ Presidential Commission for the Rehabilitation, Sanitation and Sustainable Use of the Ozama and Isabela River Basins.



CATIE and IICA partners for sustainable development

As partner institutions, the Inter-American Institute for Cooperation on Agriculture (IICA) and CATIE launched a new work cycle for the interinstitutional coordination and cooperation committee, made up of officials from both institutions. Its thematic sphere of action includes corporate-administrative matters and technical-academic cooperation.

At the technical level, in 2018 CATIE worked to define a joint action model that would respond to its strategic vision and medium-term plan of action. Accordingly, it implemented important joint projects such as PROCAGICA-Central America and PROCAGICA-Dominican Republic in the area of coffee production, with the support of the Agricultural Research Center for International Development (CIRAD), and the BioPaSOS project, an initiative aimed at promoting climate-smart livestock production in three Mexican states. The latter project also involves Mexican government institutions.

At the end of 2018, CATIE and IICA signed several agreements in Mexico as a framework for their collaborative actions and negotiated a physical space (office) for CATIE in Mexico.

Other joint technical initiatives included the drafting of proposals for projects in Haiti. On the academic front, progress was made in developing an online (virtual) Master's Program on Food Security, based on a Master's program developed previously by IICA. This online Master's program is expected to begin in July 2019.

With regard to corporate matters, the Inter-American Board of Agriculture (JIA) issued Resolution 507 instructing IICA and CATIE, with the participation of the Costa Rican Government, to establish an ad hoc work group, with the aim of preparing a strategic plan for CATIE's future. This would include scenarios and alternatives for restructuring and strengthening CATIE's organizational, scientific, academic and financial platform, as well as its legal base. This work group was established in 2018 and is already working.



Technological advances

In 2018, CATIE introduced major technological changes, particularly the efforts to increase the Internet speed, which went from 80 MB (megabits) to 120 MB. In the last two years, Internet speed throughout the campus has tripled, enabling services such as Web browsing, email, IP telephony, webinars, cloud storage, etc. to function more efficiently.

Another achievement was the renewal of CATIE's access to the Microsoft Imagine Program, which has allowed all our students and teachers to use free licenses (valued at more than USD 500,000) for their academic work. CATIE also completed the process of implementing the new IP telephony system (SIPTrunk), enabling users to make better quality calls and reducing the institution's telephone costs by 30%.

It is important to mention that in 2018 CATIE launched a solar energy pilot plan for the Department of Information and Communication Technology (ICT). CATIE currently has the resources to develop the project, which has already been adjudicated. Implementation is expected to begin in the first months of 2019. This project will generate 95% of the ICT building's energy, providing annual savings of approximately USD 6,800.

In order to optimize its operational processes and install modern and efficient systems CATIE moved forward with its plans to adopt the new software, Enterprise Resource Planning (ERP), which will replace the IFIS (Integrated Financial Information System) that has been used for several decades. In this regard, during 2018 different service providers and proposals were evaluated. Implementation of the new software is scheduled to begin in 2019.

Finally, eight software projects were developed for different CATIE programs, contributing to generate income for the department and supporting the Center's research.



Our finances

It was possible to maintain a positive balance in CATIE's finances, obtaining a net result of USD 15 030. CATIE's accounting is based on IFRS (International Financial Reporting Standards) and in 2018 the new IFRS 9 standard was applied (financial instruments), in which the accounts receivable of the member countries was analyzed.

In this context, CATIE absorbed a sum of USD 678,000 for outstanding contributions in 2018, but through an important coordination with the CATIE representatives or liaisons in the countries, USD 1.2 million in country quotas were recovered.

In addition, IICA provided USD 938 100 as a contribution to CATIE, which was key to achieving positive financial health during 2018.

On the other hand, CATIE's commercial farm brought in the first harvest of the 5.4 ha of organic sugarcane that resulted in an average hectare production of 133 tons and generated an income of USD 55 555.

Finally, CATIE, through financing granted by Fundatrópicos, managed to improve its assets with the purchase of transport vehicles (four cars) and two motorcycles for the security area; as well as assets for the commercial farm with two tractors and two pickups. In addition, investments were made to improve the services of the hospitality area.

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 Belize, Bolivia, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Venezuela and the Inter-American Institute for Cooperation on Agriculture (IICA).



Solutions for environment and development
Soluciones para el ambiente y desarrollo



Modification 2019 Program Budget

56th Regular Meeting of the Board of Directors

March 12 to 14, 2019 – Turrialba, Costa Rica

Contents

I. Introduction	3
II. Structure of the budget and accounting funds.....	4
III. Description of the process for the modification of the 2019 program budget.....	4
IV. Modifications to income budgeted for 2019	4
V. Modifications to expenses budgeted for 2019	6
VI. The modified income and expense budget for 2019	8

I. Introduction

This document contains the updated version of the budget program for income and expenses of the Tropical Agricultural Research and Higher Education Center (CATIE) for 2019. The review process that led to the budget modification in question has been led by the Office of the Director General and it included the unrestricted accounting funds (regular core and productive activities) and those of a restricted nature (agreements and custody), which are described in section II.

The purpose of the revision of the institutional budget program for 2019 was to carry out a comprehensive and realistic analysis of the financial resources that are expected to be obtained in the year, to adjust the revenue projections from the different accounting funds and to make the corresponding budget allocations to the different divisions and areas of the Center. The foregoing, as part of the measures that the new General Directorate has adopted to maintain a financial balance between the institution's income and expenses.

In accordance with the provisions of the CATIE Financial Regulations, Article 32, the General Director may approve modifications to increase or decrease the total amount of the approved institutional budget by up to 10%, provided that he has the corresponding financial content and makes the corresponding modifications in the income and expense accounts, as applicable, which must be reported to the board of directors at its next meeting. Any increases or reductions in the total amount of the institutional budget greater than 10% must be submitted to the Board of Directors for approval.

Based on the previous standard, and given that the total amount of the modification to the income and expenditure budget program for 2019 amounts to US\$2,018,000, corresponding to approximately 8% of the total budget approved for 2019 for US \$ 23,864,000, according to resolution 2-17/49 of the Executive and Finance Committee of the Board of Directors, dated September 11, 2017, the esteemed members of the Board of Directors are informed by the General Directorate of CATIE about the budget modification described in this document.

II. Structure of the budget and accounting funds

The CATIE income and expenditure budget consists of core funds, productive and commercial activities, agreements and custody funds. The segregation of the budget by funds is due to the nature of the activities carried out, the origin of the resources that finance them, and existing restrictions on each type of fund. Each fund is an independent financial unit with its own assets, liabilities, net assets, income and expenses.

The Financial Statements of the Center identify the restricted or unrestricted nature of the accounting funds described below.

Core activities fund: they are classified as non-restricted funds, consisting of resources coming from the contributions of IICA and the quotas of CATIE member countries, income originating in the teaching activities, surpluses coming from the service activities and commercial farms, amounts received for indirect cost recovery (ICR) and overhead (OH) form projects, donations and specific contributions from different agencies and governments, as well as administrative management, treasury management and returns on the trusts.

Productive and commercial activities fund: cataloged as non-restricted funds, it covers the activities carried out in the sugarcane, coffee and beef cattle fattening farms, dairy, forestry and sale of forest seeds. It also includes institutional services such as lodging, hotel, transportation, laundry, and the sale of souvenirs, among others.

Agreements fund: its use is strictly restricted to the activities that the provider of the funds has previously indicated. These resources are not owned by CATIE. The Center is responsible for the execution of the funds in accordance with the terms and regulations established in the respective agreement, contract or letter of understanding.

Funds in custody are created for the control of income and expenses at the divisional level, product of contracts and projects with specific purposes to be developed in the short term. These include consultancies and/or projects for amounts less than US\$75,000, educational scholarships for scientific and professional masters, scholarships for training courses and technical communication services, among others, which are also part of the income of this background.

III. Description of the process for the modification of the 2019 program budget

During the first two months of 2019, the General Directorate, in conjunction with the Center's directorates and the Budget Office, carried out a review process of the institutional budget program for this year. This process allowed adjusting the revenue and expenditure projections for the different accounting funds, based on realistic income expectations, considering the changes that have occurred in the CATIE project portfolio and the expected performance of productive and commercial activities carried out by the Center.

To carry out the aforementioned modification, we proceeded to review with the heads of each of the divisions, programs and work areas, the initial projections of income and expenses for 2019, incorporating those adjustments that were necessary according to the new agreement negotiations, revisions of income goals, changes in cost structures and establishment of institutional priorities by the General Directorate.

IV. Modifications to income budgeted for 2019

The total amount of the modified revenue budget for 2019 is estimated at approximately US\$25.8 million, without taking into account those revenues related to the fair value gains of biological assets, sale and

disposal of assets, donation of property and equipment, or the capitalization of new investments in biological assets.

The modifications made to the income lines that make up the CATIE budget program for 2019 are presented in detail below.

**Table 1: Detail of modification to the income budget program for 2019
(amounts in US\$ x 1000)**

Fund / Division / Program	INITIAL BUDGET 2019	Modification	FINAL BUDGET 2019	Percent Variation
CORE ACTIVITIES FUND	5 335	-71	5 264	-1%
IICA Contribution	1 000	0	1 000	0%
Partner quotas	600	0	600	0%
Fundatropicos Trust	605	0	605	0%
Administration and Finance - Services	441	36	477	8%
Administration and Finance - Commercial	171	0	171	0%
Technical Programs (PIDEA, PBBByCC, PRAGA)	787	3	790	0%
Education	1 334	-460	874	-34%
Outreach	397	350	747	88%
COMMERCIAL ACTIVITIES FUND	2 522	0	2 522	0%
Administration and Finance - Services	1 206	0	1 206	0%
Administration and Finance - Commercial	1 316	0	1 316	0%
AGREEMENTS FUND	12 688	2 539	15 227	20%
Technical Programs (PIDEA, PBBByCC, PRAGA)	7 204	41	7 245	1%
Outreach	5 485	2 498	7 983	46%
CUSTODY FUND	3 318	-450	2 868	-14%
Administration and Finance - Services	139	0	139	0%
Administration and Finance - Commercial	21	0	21	0%
Strategic Services	100	100	200	100%
Technical Programs (PIDEA, PBBByCC, PRAGA)	966	0	966	0%
Education	1 709	-550	1 159	-32%
Outreach	383	0	383	0%
TOTAL BUDGET	23 864	2 018	25 882	8%

The unrestricted core fund shows a total decrease of US\$71,000 in its income budget for 2019. The Outreach and Education lines present the highest income adjustments for US\$350,000 and US\$460,000, respectively.

In the case of the Outreach income line, there was an increase in income as a result of the signing of the second phase of the COSUDE Project – Water Harvesting, Nicaragua; and the signing of the Chocolate4All

project in Honduras, along with other initiatives in that country. In addition, the EU-Nutrition Information Platform (PINN) project in Guatemala is consolidated.

For the Education activities, there was a decrease in the recovery of student scholarship enrollments with a promotion of 50 students; In this sense, we continue following up on the agreement with Agrosavia-Colombia and the payment agreement of the Dominican Republic as part of the debt swap for education strategy.

The income from overhead by the technical programs remains stable for 2019, as more project proposals are won, the funds from the agreements will be added to the budget.

The funds in custody have been reduced due to the fact that the Education area has faced high competition for new sources of external financing for scholarships in the region.

V. Modifications to expenses budgeted for 2019

As indicated in Table 2, for the period 2019 there is a total expense budget balanced by about US\$25.8 million, to finance the activities led by the different divisions of the Center.

The modified expense budget includes a reserve of US\$576,000 to cover the impairment of accounts receivable in 2019 as a result of the application of NIIF (IFRS), decreases in the value of the biological assets and to cover reductions in income or contingencies.

It should be noted that according to the provisions established in Center's regulatory framework, the allocation of budgetary resources from the unrestricted core fund was made giving priority to strategic functions of the Center and seeking the greatest possible optimization in the administration of the institution's financial resources.

The variations in expenditures budgeted in the core funds were made with the purpose of maintaining the financial balance between income and expenses. At the budget level, the Higher Directives maintain austerity in their expenses, and administration and finance aim to make the support operations such as surveillance, maintenance and miscellaneous services more efficient.

The Directorate General of Catie, following up on the recommendations of the Board of Directors and the External Evaluation, has strengthened the Office of Strategic Partnerships; this Office currently plays an important role in following up on the different actions for resource mobilization. The office of Evaluation, planning and monitoring has also been created to measure or improve team work in the different areas of the institution.

The key functions of research and education have been strengthened in order to ensure the stability of technical and scientific professionals and to maintain the teaching faculty that will allow them to meet the academic needs of students for the coming periods.

The modified allocations in the Center's expenditure budget for 2019 are presented in detail below.

Table 2: Detail of modification to the budget of expense program for 2019
(amounts in US\$ x 1000)

Fund / Division / Program	INITIAL BUDGET 2019	Modification	FINAL BUDGET 2019	Percent Variation
---------------------------	------------------------	--------------	----------------------	----------------------

CORE ACTIVITIES FUND	5 335	-71	5 264	-1%
Higher Directives	622	-22	600	-4%
Administration and Finance - Services	1 273	-185	1 088	-15%
Strategic Services	166	-28	138	-17%
Office of Planning, Monitoring, Evaluation	0	127	127	0%
Global Partnerships and Resource Mobilization	73	93	166	127%
Technical Programs (PIDEA, PBBByCC, PRAGA)	1 077	-24	1 053	-2%
Education	1 138	44	1 182	4%
Outreach	325	13	338	4%
Other categories	662	-89	573	-13%
Reserve Fund /Operations	662	-89	573	-13%
COMMERCIAL ACTIVITIES FUND	2 522	0	2 522	0%
Administration and Finance - Services	893	0	893	0%
Administration and Finance - Commercial	1 152	0	1 152	0%
Surplus Services Activities	313	0	313	0%
Surplus Commercial Activities	164	0	164	0%
AGREEMENTS FUND	12 688	2 539	15 227	20%
Technical Programs (PIDEA, PBBByCC, PRAGA)	7 204	41	7 245	1%
Outreach	5 485	2 498	7 983	46%
CUSTODY FUND	3 318	-450	2 868	-14%
Administration and Finance - Services	139	0	139	0%
Administration and Finance - Commercial	21	0	21	0%
Strategic Services	100	100	200	100%
Technical Programs (PIDEA, PBBByCC, PRAGA)	966	0	966	0%
Education	1 709	-550	1 159	-32%
Outreach	383	0	383	0%
TOTAL BUDGET	23 864	2 018	25 882	8%

V. The modified income and expense budget for 2019

Annex 1 presents the modified income and expense budget of CATIE for 2019, grouped by its different accounting funds. The formulation of this budget aims to maintain a financial balance in the institution, administrating the financial resources available in an efficient, economic manner and prioritizing the continuity of key functions in the institution.

Annex 1. Modified budget program for the period 2019 (amounts in US\$ x 1000)

Categories	Unrestricted funds			Restricted funds		TOTAL	%
	Core fund	%	Commercial fund	Agreements fund	Custody fund		
INCOME:							
IICA contribution	1 000	19%	0	0	0	1 000	4%
Country quotas	600	11%	0	0	0	600	2%
Fundatrópicos Trust	605	11%	0	0	0	605	2%
Administration and Finance	477	9%	0	0	138	615	2%
Commercial activities	171	3%	2 522	0	21	2 715	10%
Strategic Services	0	0%	0	0	200	200	1%
Technical Programs	790	15%	0	7 245	966	9 001	35%
Education	874	17%	0	0	1 159	2 033	8%
Outreach	747	14%	0	7 983	383	9 113	35%
Total income	5 264	100%	2 522	15 227	2 868	25 882	100%
% distribution income per accounting fund	20%		10%	59%	11%	100%	
EXPENSES:							
Higher Directives	600	11%	0	0	0	600	2%
Administration and Finance	1 088	21%	0	0	139	1 226	5%
Commercial activities	0	0%	2 045	0	21	2 066	8%
Strategic Services	138	3%	0	0	200	338	1%
Office of Planning, Monitoring, Evaluation	127	2%	0	0	0	127	0%
Global Partnerships and Resource Mobilization	166	3%	0	0	0	166	1%
Technical Programs	1 053	20%	0	7 245	966	9 264	36%
Education	1 182	22%	0	0	1 159	2 341	9%
Outreach	338	6%	0	7 983	383	8 704	34%
Total expenses	4 691	89%	2 045	15 227	2 868	24 832	96%
% distribution expenses per accounting fund	19%		8%	61%	12%	100%	
Budget balances not applied	573	12%	477	0	0	1 050	4%
<u>Budget balances applied:</u>							
Reserve operating fund	573	100%	0	0	0	573	55%
Transfer of surpluses to core fund	0	0%	477	0	0	477	45%
Financial reserve – restricted funds	0	0%	0	0	0	0	0%
Budget balances not applied	0	100%	0	0	0	0	100%

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of the Tropical Agriculture Research and Training Center (CATIE)

Opinion

We have audited the accompanying financial statements of the Tropical Agriculture Research and Training Center ("CATIE" or the "Entity"), which comprise the statements of financial position as of December 31, 2018 and 2017, and the statements of activities, changes in net assets, and cash flows for the years then ended, and a summary of significant accounting policies and other explanatory notes.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Tropical Agriculture Research and Training Center ("CATIE" or the "Entity") as of December 31, 2018 and 2017, its financial performance and its cash flows for the year then ended, in accordance with the International Financial Reporting Standards.

Basis for Opinion

We conducted our audit in accordance with the International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Entity in accordance with the Code of Professional Ethics of the Association of Certified Public Accountant of Costa Rica and the Code of Ethics for Professional Accountants of the International Ethics Standards Board for Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with such requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis in a Matter

As detailed in note 19 to the accompanying financial statements, after issuing the report on CATIE's financial statements as of December 31, 2017 and for the year then ended, Management determined a material difference in the source documentation used in the actuarial study performed by the independent expert; therefore, it is necessary to correct the information shown in our previous report dated March 20, 2018.

Additional Financial Information

Our audit was conducted in order to have an opinion on the basic financial statements taken as a whole. The supplemental financial information included in exhibits 1 to 6 is presented in order to report on the status of the fees receivable from member countries and the execution of operations by CATIE. This information is not required by the basic financial statements. This information has been the subject of the audit procedures applied in the audit of the financial statements mentioned above, and in our opinion, is presented fairly, in all material respects, with the financial statements taken as a whole.

Responsibilities of Management and Those Charged with the Entity's Governance with the Financial Statements

Management is responsible for the preparation and fair presentation of the Entity's accompanying financial statements according to the International Financial Reporting Standards and for the internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In the preparation of financial statements, Management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as it may be necessary, the matters related to the going concern principle and using such accounting basis, unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance of the Entity are responsible for overseeing the financial reporting process of.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the International Standards on Auditing (ISAs) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the International Standards on Auditing (ISA), we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting in the preparation of the financial statements in the context of the applicable financial reporting framework. We also conclude, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw

attention in the auditor's report to the disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify the opinion on the financial statements. Our conclusions are based on information available at the date of the auditor's report. However, future events or conditions may cause the Entity to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We are required to communicate with those charged with governance at the Entity regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



Anayancy Porras Barrantos - C.P.A. No.2863

Insurance Policy No.0116 FIG 7

Expires: September 30, 2019

Revenue stamp of Law No.6663, ₡1.000, affixed and paid
La Ribera de Belén, Heredia, Costa Rica



March 12, 2019

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

STATEMENTS OF FINANCIAL POSITION AS OF DECEMBER 31, 2018 AND 2017

(Expressed in thousands of US dollars)

	Notes	2018	2017
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	1c, 2	US\$ 4,763	US\$ 3,855
Held-to-maturity investments	1d, 3	446	260
Accounts receivable	1i, 4	2,125	3,130
Inventories	1e, 5	<u>359</u>	<u>370</u>
Total current assets		7,693	7,615
PROPERTY, FURNITURE, BEARER PLANTS AND EQUIPMENT - Net	1g, 1h, 8	5,494	5,510
INTANGIBLE ASSETS	1s		16
BIOLOGICAL ASSETS	1k, 6	437	417
TRUST ASSETS	7	1,570	1,640
OTHER ASSETS	1j, 9	<u>861</u>	<u>619</u>
TOTAL		<u>US\$16,055</u>	<u>US\$15,817</u>
LIABILITIES AND NET ASSETS			
CURRENT LIABILITIES:			
Current portion of long-term debt	11	US\$ 134	US\$ 97
Trade accounts payable		79	54
Employee benefits	12	560	764
Accumulated expenses and other accounts payable	1m, 10	<u>873</u>	<u>1,051</u>
Total current liabilities		1,646	1,966
LONG-TERM DEBT	11	<u>590</u>	<u>382</u>
Total liabilities		<u>2,236</u>	<u>2,348</u>
NET ASSETS:			
Unrestricted funds:			
Regular funds	1a	1,294	1,691
Plant fund	1a	5,933	6,061
Temporarily restricted funds:			
Agreement fund	1a	4,888	4,237
Funds in custody	1a	<u>1,704</u>	<u>1,480</u>
Total net assets		<u>13,819</u>	<u>13,469</u>
TOTAL		<u>US\$16,055</u>	<u>US\$15,817</u>

The accompanying notes are an integral part of the financial statements.

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

**STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017**
(Expressed in Thousands of US Dollars)

Notes	2018						2017						
	Unrestricted Regular Funds			Temporarily Restricted Funds			Unrestricted Regular Funds			Temporarily Restricted Funds			
	Basic Activities Fund	Productive Activities Fund	Sub-total	Agreements	Custody	Total	Basic Activities Fund	Productive Activities Fund	Sub-total	Agreements	Custody	Total	
Income:													
IICA Contribution	US\$ 938		US\$ 938			US\$ 938	US\$ 968		US\$ 968			US\$ 968	
Member country fees	600		600			600	650		650			650	
Tuition of students	803		803			803	508		508			508	
Administrative support and overhead	1,186		1,186			1,186	1,469		1,469			1,469	
Miscellaneous	197		197			197	265		265			265	
Funds released from restrictions		US\$ 314	314	US\$12,150	US\$4,896	17,360				US\$13,597	US\$5,332	18,929	
Management of goods and services		1,211	1,211			1,211		US\$1,217	1,217			1,217	
Agricultural activities		1,157	1,157			1,157		1,598	1,598			1,598	
Trust contributions	7	620	620			620	619		619			619	
Total income	1n	4,344	2,682	7,026	12,150	4,896	24,072	4,479	2,815	7,294	13,597	5,332	26,223
Expenses:													
Staff	3,609	980	4,589	6,752	2,282	13,623	3,440	960	4,400	7,704	2,829	14,933	
Travel and per-diem	202	21	223	985	197	1,405	175	29	204	1,401	250	1,855	
Communications and printouts	149	64	213	332	99	644	124	42	166	280	141	587	
Building maintenance	52	253	305	93	59	457	52	221	273	108	64	445	
General expenses	307	197	504	887	243	1,634	275	186	461	889	260	1,610	
Training and scholarships	236	-	236	1,500	1,612	3,348	118		118	1,308	1,397	2,823	
Investments (in assets)	-	-	-	329	57	386				420	50	470	
Supplies and costs	40	730	770	154	149	1,073	15	774	789	208	97	1,094	
Overhead costs	24	-	24	1,118	198	1,340		4	4	1,279	244	1,527	
Total expenses	4,619	2,245	6,864	12,150	4,896	23,910	4,199	2,216	6,415	13,597	5,332	25,344	
Primary (deficit) surplus	(275)	437	162	-	-	162	280	599	879			879	
Transfer from the productive activities fund	1a	437	(437)	-	-	-	599	(599)					
Increase in unrestricted net assets		162	162	-	-	162	879		879			879	
Other non-current revenues:													
Donation and sale of assets	138	-	138	-	-	138	90	-	90	-	-	90	
Gain in valuation of biological assets	133		133			133	37		37			37	
Value of milk contribution certificates	173		173			173							
Total non-current income	444		444			444	127		127			127	
Other non-current expenses:													
Depreciation expense	8	523	523			523	545		545			545	
Amortization of intangibles	18		18			18	17		17			17	
Loss from asset disposal	14		14			14							
Loss in valuation of biological assets	6	8	8			8							
Impairment of accounts receivable - net of recoveries	4	(583)	(583)			(583)	423		423			423	
Impairment of accounts receivable		143	143			143							
Total non-current expenses	123		123			123	985		985			985	
Increase (decrease) in unrestricted net assets after non-current items		US\$ 483	US\$ 483	US\$ -	US\$ -	US\$ 483	US\$ 21	US\$ -	US\$ 21	US\$ -	US\$ -	US\$ 21	

The accompanying notes are an integral part of the financial statements.

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

STATEMENTS OF CHANGES IN NET ASSETS FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

(Expressed in Thousands of US Dollars)

	Note	Net Assets				Total
		Unrestricted Funds		Temporarily Restricted Funds		
		Regular	Plant	Agreements	Custody	
BALANCE, AS OF DECEMBER 31, 2016		US\$1,332	US\$6,343	US\$ 4,582	US\$ 1,740	US\$ 13,997
Restricted contributions received from donors				13,697	5,204	18,901
Disbursements from restricted funds				(13,673)	(5,332)	(19,005)
Other movements in restricted funds		56		(280)	(2)	(226)
Recognition of balances receivable from donors	1/			468	845	1,313
Release of restricted funds	1/			(557)	(975)	(1,532)
Decrease in funds		<u>303</u>	<u>(282)</u>			<u>21</u>
BALANCE, AS OF DECEMBER 31, 2017		1,691	6,061	4,237	1,480	13,469
Adjustment from Adoption of IFRS 9	4, 15	(936)				(936)
Restricted contributions received from donors				12,557	5,176	17,733
Disbursements from restricted funds				(12,150)	(4,896)	(17,046)
Other movements in restricted funds		(237)	165			(72)
Recognition of balances receivable from donors	1/			712	789	1,501
Release of restricted funds	1/			(468)	(845)	(1,313)
Decrease in funds		<u>776</u>	<u>(293)</u>			<u>483</u>
BALANCE, AS OF DECEMBER 31, 2018		<u>US\$1,294</u>	<u>US\$5,933</u>	<u>US\$ 4,888</u>	<u>US\$ 1,704</u>	<u>US\$ 13,819</u>

The accompanying notes are an integral part of the financial statements.

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

(Expressed in Thousands of US Dollars)

	Notes	2018		2017
OPERATING ACTIVITIES:				
Increase in net assets		US\$ 483		US\$ 21
Adjustments to reconcile the change in net assets with net cash provided by (used in) operating activities:				
Depreciation	8	523		545
Amortization of intangible assets		(8)		17
Impairment of accounts receivable - member countries	4	248		400
Recovery of accounts	4	831		60
Loss in disposal of biological assets	6	9		15
Changes from valuation of biological assets	6	(18)		(37)
Financial expenses on loans		27		19
Other movements of restricted funds		(352)		(444)
Changes in operating assets and liabilities:				
Accounts receivable		(542)		(533)
Inventories		11		144
Trade accounts payable		25		(18)
Employees' legal benefits		(204)		(553)
Accumulated expenses and other accounts payable		<u>(204)</u>		<u>312</u>
Cash provided by (used in) the operating activities		829		(52)
Interest paid		<u>(1)</u>		<u>(2)</u>
Net cash provided by (used in) the operating activities		<u>828</u>		<u>(54)</u>
INVESTMENT ACTIVITIES:				
Short-term investments		(186)		(185)
Additions to property, furniture and equipment	8	(436)		(94)
Additions to intangible assets		24		
Proceeds from the sale of fixed assets	8	67		79
Decrease of biological assets	6	(11)		(30)
Additions to the trust fund		70		(72)
Other financial assets		<u>(242)</u>		<u>(44)</u>
Net cash used in the investment activities		<u>(714)</u>		<u>(346)</u>
FINANCING ACTIVITIES:				
New loans		370		333
Amortization of debt		(125)		(131)
Temporarily-restricted contributions		17,733		18,901
Disbursements for the execution of temporarily-restricted funds		<u>(17,184)</u>		<u>(19,101)</u>
Net cash provided by the financing activities		<u>794</u>		<u>2</u>

(Continues)

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

(Expressed in Thousands of US Dollars)

	2018	2017
NET VARIATION IN CASH AND CASH EQUIVALENTS	US\$ 908	US\$ (398)
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR	<u>3,855</u>	<u>4,253</u>
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	<u>US\$ 4,763</u>	<u>US\$ 3,855</u>

TRANSACTIONS THAT DID NOT GENERATE ANY CASH MOVEMENT:

1. During 2018 and 2017, donations of machinery, vehicles, furniture, and equipment for the sum of US\$138 and US\$96 respectively. Such donations come from the Agreements Fund for US\$85 and US\$27 for 2018 and 2017, respectively, and from the Custody Fund, for US\$53 and US\$69 for 2018 and 2017, respectively. The transactions mentioned above did not use or generate cash.
2. For 2017, due to the change in the IFRS regarding biological assets (specifically bearing plants), biological assets were reclassified for the sum of US\$531 to the fixed assets account. This transaction did not use or generate any cash.

(Ends)

The accompanying notes are an integral part of the financial statements.

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

(Expressed in Thousands of US Dollars)

1. NATURE OF BUSINESS, BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Nature of Business - The Tropical Agriculture Research and Training Center ("CATIE") is an international university at a postgraduate level that teaches and trains leaders in agriculture, natural resources, and related fields, so that they are able to face challenges and take advantage of the opportunities of a changing world. Therefore, CATIE has postgraduate programs recognized for their quality and track record; it shows what it does with hundreds of members in several countries, and shares the progress and levels of science and technology in different areas of interest, and the demands and needs of today's world. Its headquarters are located in Turrialba, Costa Rica, and it is formed by thirteen member countries and the Inter-American Institute for Cooperation on Agriculture (IICA). Its mission is to achieve a sustainable and comprehensive human wellbeing in Latin America and the Caribbean by fostering education, research, and an external outreach of sustainable agricultural management and the conservation of natural resources.

CATIE was established in 1973 through a ten-year agreement signed with the Costa Rican Government and IICA. In 1983, this agreement was amended and extended up to year 2000. As indicated in Note 17, in 2000 the parties signed a new agreement for a twenty-year period.

In addition, in 1993, CATIE created the Foundation for Education and Research in the Development and Conservation of Natural Resources of the American Tropics (FUNDATROPICOS), a Costa Rican foundation which main purpose is to achieve the financial sustainability of CATIE through management of donations and other funds received, in order to ensure a fixed income source for the continuance of its operations.

Basis of Presentation - CATIE's financial statements are prepared according to the International Financial Reporting Standards (IFRS), and in addition, certain guidelines of the Financial Accounting Standard No.117, issued by the American Institute of Certified Public Accountants of the United States of America, have been adopted (applicable to not-for-profit entities commencing December 1994) (Note 1r), since the IFRS do not include specific matters applicable to not-for-profit entities.

The financial statements have been prepared on the basis of the historical cost, as explained in the following accounting policies.

Generally, historical cost is based on the fair value of the consideration granted in exchange of goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Entity takes into account the characteristics of the asset or liability if market participants

would take those characteristics into account when pricing the asset or liability on the measurement date. Fair value for measurement and/or disclosure purpose in these financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of IFRS 2, leasing transactions that are within the scope of IAS 17, and, measurements that have some similarities to fair value but are not fair value, such as net realizable value in IAS 2 or value in use in IAS 36.

In addition, for financial reporting purposes, fair value measurements are categorized into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- **Level 1** - Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- **Level 2** - Inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- **Level 3** - Unobservable inputs for asset or liability.

Significant Accounting Policies - The significant accounting policies used by CATIE in the preparation of the financial statements are summarized as follows:

a. **Funds Managed by CATIE** - Funds managed by CATIE are classified in the financial statements, according to their restrictions, as Unrestricted Funds, Plant Fund and Temporarily Restricted Funds. These funds are segregated into the following categories based on their source and purpose:

- **Unrestricted Regular Funds** -

- *Basic Activities Fund* - It includes the basic activities of CATIE in promoting and developing the research and education in agriculture, forestry, livestock, and related fields, as established in its original articles of incorporation.

Such activities are mainly financed through member countries fees, IICA's annual contributions, revenues from training activities, specific donations and contributions received for financing these activities, through interests generated on trusts of which CATIE is a beneficiary, and through the administrative and logistical support (overhead) charged to project agreements.

- *Productive Activity Fund* - It comprises those activities developed by CATIE in the agriculture, livestock and management of goods and services fields, which generate an economic benefit. The main productive activities are: cultivation of sugarcane, coffee, and other minor agricultural products, as well as cattle farming, lodging services, and data processing services, among others.
- *Plant Fund* - This Fund controls the real property, furniture and equipment acquired with resources from the Basic Activities Fund and funds donated by national or international organizations. The assets included in this Fund are part of CATIE's available resources to achieve its institutional goals. The balance of the Plant Fund is

represented by the monetary value, net of depreciation, of real and personal property owned by CATIE. This Fund does not include fixed assets acquired with resources from the Agreements Fund, since capital expenditures are recognized as expenses of the respective project. Nevertheless, if such assets are donated, exchanged, or sold to CATIE upon termination of the contract, they will be included in this Fund. Physical control over fixed assets acquired with resources from the Agreements Fund is kept by CATIE, through a fixed assets database.

- **Temporarily Restricted Funds -**

- *Funds in Custody* - Includes funds received from national and international organizations to finance training and education provided by CATIE to some scholarship students and technicians from those institutions, as well as for the execution of certain research projects, which negotiated amount is under US\$75,000. For control purposes, income and expenses related to those funds are recorded separately until their specific purposes are fulfilled.
- *Agreement Fund* - Correspond to funds received by CATIE for the execution of certain agreements and contracts subscribed with national and international organizations, and their use is specifically restricted to the agreed-upon activities of such agreements and contracts. For control purposes, separate accounting records are used for the income and expenses related to those funds. Some of these funds are administered in independent checking accounts, according to the contractual requirements established by the donor. In addition, CATIE has entered into agreements with national and international organizations on which CATIE has no participation or technical responsibility whatsoever. Thus, income and expenses of such funds are not shown as such in the Statement of Activities. The balance administered for this concept as of December 31, 2018 and 2017, amounts to US\$127 and US\$121, respectively.

- b. **Currency and Foreign Currency Transactions** - The accounting records of CATIE are kept in United States of America dollars (US\$), its functional currency, and the financial statements and its notes, are also expressed in such currency. Monetary assets and liabilities originated in currencies other than their functional currency are translated to US dollars at the exchange rates in effect in each country as of the date of the financial statements.

Transactions made in foreign currency are registered at the exchange rate in force as of the date of the transaction. Assets and liabilities in foreign currency at the end of each accounting period are adjusted at the exchange rate in force as of such date. Exchange rate differences originated from the liquidation of assets and obligations denominated in foreign currency and from the adjustment of balances as of closing date are recognized in the results of the period in which they occurred.

As of December 31, 2018 and 2017, exchange rates for US\$1 at each of the countries where CATIE develops its activities were the following:

Country	Currency	Exchange Rate as of December 31, 2018	Exchange Rate as of December 31, 2017
Belize	Belize Dollar	2.00	2.00
Bolivia	Bolivianos	6.86	6.91
Costa Rica	Colones	604,39	566.42
Guatemala	Quetzales	7.74	7.34
Honduras	Lempiras	24.339	23.5879
CEE	Euro	0.8740	0.8329
Nicaragua	Córdobas	32.331	30.78
Peru	Nuevo Sol	3.369	3.236
Dominican Republic	Dominican Pesos	50.09	48.25

- c. **Cash and Cash Equivalents** - The cash accounts include restricted balances, held in separate bank accounts, to be used solely to cover disbursements of the agreements signed by CATIE with different donors, or to receive disbursements contributed by them. These restricted balances amount to a US\$4,847 and US\$3,855 as of December 31, 2018 and 2017, respectively. All investments with an original maturity of less than three months are considered cash equivalents.
- d. **Held-to-Maturity Investments** - They are investments with fixed maturity dates. CATIE has the intention and ability to hold them until maturity. Held-to-maturity investments are measured at amortized cost using the effective interest method less any impairment, recognizing revenue on an effective yield basis.
- e. **Inventories** - Material and supplies inventories are valued at average cost, which does not exceed its net realizable value. The coffee mill inventory and forest seed bank are valued at amounts that are approximate to its net fair value. The Entity follows the policy of directly including the value of the damaged or obsolete inventories in the operating results, according to the analyses performed on an annual basis.
- f. **Financial Instruments** - Financial assets or financial liabilities are initially valued at fair value. Transaction costs that are directly attributable to the acquisition or issue of a financial asset or financial liability (different from the financial assets at fair value through profit or loss) are added or reduced from the fair value of the financial assets or liabilities, when applicable, since initial recognition. The transaction costs directly attributable to the acquisition of financial assets and liabilities at fair value through profit or loss are immediately recognized in the profit or loss. As of December 31, 2018 and 2017, CATIE has not entered into any agreement involving derivative financial instruments such as futures, options, and financial swaps.

Financial Assets - Every regular purchase or sale of financial assets are recognized and derecognized at a trading date. Regular purchases or sales are financial asset purchases or sales that require the delivery of assets within the term established by the regulations or the usual practice in the market.

All recognized financial assets are subsequently recognized in full, either at amortized cost or fair value according to the financial asset classification.

Financial Asset Classification - Debt instruments that meet the following conditions are subsequently measured at amortized cost:

- If the financial asset is held within a business model whose objective is to hold assets in order to collect contractual cash flows; y
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A debt instrument is normally measured at FVOCI if both of the following conditions are met:

- The asset is held within a business model in which assets are managed to achieve a particular objective by both collecting contractual cash flows and selling financial assets; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

By default, all the other financial assets are subsequently measured at fair value through profit or loss.

In spite of the above, CATIE can make the following irrevocable choice/designation since initial recognition of a financial asset:

- CATIE can irrevocably choose to present subsequent changes in the fair value of an equity investment in the other comprehensive income if the following conditions are met (see (iii) below); and
- CATIE may irrevocably designate a debt instrument as measured at FVTPL at initial recognition if doing so eliminates or significantly reduces accounting mismatch (see (iv) below).
 - (i) *Amortized Cost and Effective Interest Method* - The effective interest method is a method used to calculate the amortized cost of a debt instrument and allocate interest income during the relevant period.

For the financial assets that were not purchased or originated by impaired-credit financial assets (for example, impaired-credit financial assets since initial recognition), the effective interest rate is the rate that accurately discounts the future expected cash inflows (including all paid or received fees that are an integral part of the effective interest rate, the transaction costs, and other premiums or discounts), excluding expected credit losses throughout the expected life cycle of a debt instrument or, if applicable, a shorter term at carrying amount, net of the debt instrument since initial recognition. For the purchased or originated impaired-credit financial assets, a credit-adjusted effective interest rate is calculated by discounting the future expected cash flows, including the expected credit losses, at the amortized cost of the debt instrument since initial recognition.

The amortized cost a financial asset is the amount at which the financial asset is measured since initial recognition less the

reimbursements of the principal, plus the accrued amortization using the effective interest rate method of any difference between such initial amount and the amount at maturity, adjusted by any loss. The gross carrying amount of a financial asset is the amortized cost of a financial asset before adjusting any allowance for losses.

The interest income is recognized on an effective interest rate basis for the debt instruments subsequently measured at amortized cost or fair value through other comprehensive income. For the purchased or originated credit-impaired financial assets, the interest income is calculated based on the effective interest rate at the gross carrying amount of a financial asset, except for the financial assets that subsequently suffered credit impairment. For the financial assets that subsequently suffered credit impairment, the interest income is recognized based on the effective interest rate at amortized cost of the financial asset. If in subsequent reporting periods, the credit risk of the credit-impaired financial instrument improves, so that the financial asset is no longer credit-impaired, the interest income is recognized based on the effective interest rate at the gross carrying amount of the financial asset .

For the purchased or originated credit-impaired financial assets, CATIE recognizes the interest income based on the credit-adjusted effective interest rate at amortized cost of the financial assets since initial recognition. The calculation does not use a gross basis again, even if the credit risk of the financial asset subsequently improves, so the financial assets are no longer credit-impaired.

Interest income is recognized through profit or loss and is included in "Financial assets - Income interest".

- (ii) *Debt Instruments Classified at Fair Value through Other Comprehensive Income* - These financial instruments are initially measured at fair value plus transaction costs. Later, the changes to the carrying amount of these instruments through foreign exchange profit or loss, the impairment of the profit or loss, and the interest income calculated on an effective interest rate basis are recognized in the profit or loss. The amounts that are recognized as profit or loss are the same as the amounts that would have been recognized as profit or loss if they had been measured at amortized cost. All the other changes to the carrying amount of these instruments are recognized in the other comprehensive income or accrued under the heading of investment revaluation reserve. When these instruments are derecognized, the accrued profit or loss previously recognized in the other comprehensive income is reclassified as profit or loss.
- (iii) *Equity Investments designated as Fair Value Through Other Comprehensive Income* - At initial recognition, CATIE may make the irrevocable choice (instrument for instrument) to designate equity instrument investments as Fair Value through other comprehensive income. The designation at fair value through other comprehensive income is not allowed if the equity investment is held for trading or if it is a contingent consideration recognized by an acquirer in a business combination.

A financial asset is held for trading if:

- it has been obtained to be sold in the short run,
- at initial recognition, it is part of an identified financial instrument portfolio that CATIE manages collectively and if there is evidence of a recent pattern to earn profits in the short run, or
- it is a derivative (except for derivatives that are contractual financial guarantees or a hedging instrument).

Equity instrument investments at fair value through other comprehensive income are initially recognized at fair value plus transaction costs. Then, they are measured at fair value with profit or loss resulting from changes to the fair value recognized in other comprehensive income and accrued in the investment revaluation reserve. The accrued profit or loss cannot be reclassified as profit or loss in the item of equity investments, but it is rather transferred to retained earnings.

The dividends of these equity instrument investments are recognized in the profit or loss according to IFRS 9, unless the dividends clearly represent a recovery of part of the investment cost. The dividends are included in the item of financial income in the profit or loss of the fiscal year.

CATIE has designated all the equity instrument investments that are not held for trading as fair value through other comprehensive income in the initial application of IFRS 9.

(iv) *Financial Assets at Fair Value through Profit or Loss* - The financial assets that do not meet the criteria to be measured at amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. Specifically:

- Equity instrument investments are classified as fair value through profit or loss, unless CATIE designates an equity investment that is not held for trading or a contingent consideration resulting from a business combination as fair value through other comprehensive income at initial recognition (see (iii) above).
- Debt instruments that do not meet the conditions of amortized cost or fair value through other comprehensive income (see (i) and (ii) above), are classified at fair value through profit or loss. Moreover, the debt instruments that meet the conditions of amortized cost or fair value through other comprehensive income can be designated as fair value through profit or loss since initial recognition, if such designation eliminates or significantly reduces a measurement or recognition inconsistency (denominated "accounting disparity") that would result from the measurement of assets or liabilities or the recognition of profit or loss on different bases. CATIE has not designated any debt instruments at fair value through profit or loss.

Financial assets at fair value through other comprehensive income are measured at fair value at the end of each reporting period, with any profit or loss of fair value recognized in the profit or loss as long as it is not part of a designated hedging relationship. The net profit or loss recognized in the profit or loss includes any dividends or interest earned in the financial asset and included in "other profit or loss."

- g. **Property, Furniture, Bearer Plants and Equipment** - CATIE follows the policy of recording funds disbursed for the acquisition of property, furniture, bearer plants and equipment as expenses, and it subsequently capitalizes those amounts in the Plant Fund whenever those assets are acquired with resources from the Basic Activities Fund. Therefore, such capitalization is performed based on the acquisition cost of the assets.

CATIE also registers as part of the Plant Fund property, plant and equipment acquired through Funds in Custody as part of the Plant Fund, except in those cases the entity where the person responsible for the fund communicates of the non institutional use of the asset upon termination of the contract or agreement.

- h. **Depreciation** - Depreciation of property, furniture, bearer plants and equipment is made using the straight-line method over the estimated useful lives of the respective assets, as shown below:

Detail	Depreciation Rates
Buildings	2 to 10%
Machinery	6.67 to 20%
Vehicles	10 to 16.67%
Office and home furniture and equipment	10 to 100%
Laboratory equipment	10 to 33.33%
Computer equipment and licenses	10 to 33.33%
Software licenses	20 to 33.33%
Coffee plantations	6.67 a 10%
Sugar cane plantations	7.69 a 10%

Depreciation expense is recorded in the Plant Fund.

- i. **Allowance for Impairment of Accounts Receivable from Member Countries** - As of 2011, CATIE calculates this impairment based on Article 8 of the "General Regulations of CATIE" which state that the Member State in arrears in the payment of their fees for more than 2 full years will have the right to vote in the Superior Council of Ministers. Based on this article, CATIE has recorded impairments for those member country fees that have been in arrears for two years or more.

When IFRS 9 became effective on January 1, 2018, the amount of the expected credit loss is updated on each reporting date to reflect changes in credit risk since the initial recognition of the respective financial instrument. For 2018, the impairment sum was US\$210 (thousands) and for 2017, it was US\$468 (thousands).

CATIE recognizes an allowance for losses from foreseen credit losses in accounts receivable from member countries. The amount of credit losses is updated on each reporting date to reflect the changes in the credit risk since the initial recognition of the respective financial instrument.

CATIE recognizes lifetime expected credit losses on accounts receivable from member countries. The expected credit losses on these financial assets are estimated using an allowance matrix based on the historical experience of credit losses, adjusted by factors that are specific to these debtors, the general economic conditions, and an assessment of the current direction and the forecast of conditions on the reporting date, including the time value of money when appropriate.

For the remaining financial instruments, CATIE recognizes a lifetime credit loss when there has been a significant increase in the credit risk since initial recognition. Nevertheless, if the credit risk of a financial instrument has not significantly increased since initial recognition, CATIE measures the allowance for losses for such a financial instrument in an amount equal to the expected 12-month credit loss.

The lifetime expected credit loss represents the expected credit loss resulting from all the events of noncompliance during the expected useful life of a financial instrument. In contrast, the expected 12-month credit loss represents the portion of the lifetime expected credit loss that will result from predetermined events on a financial instrument within 12 months of the reporting date.

- j. **Valuation of Other Assets** - CATIE registers the amounts disbursed for the purchase of certificates of investment of Cooperativa de Productores de Leche Dos Pinos, R.L., at historical value. Every year an impairment valuation takes place, taking into consideration the reasonability of the balance.

With the implementation of IFRS commencing on January 1, 2018, the sum of the disbursements for acquiring certificates of investment held at their historical value are measured at fair value, taking the profit or loss in valuation to results.

- k. **Biological Assets** - CATIE follows the practice of capitalizing the disbursements incurred for developing and breeding cattle for the dairy activity. At the end of each accounting period, dairy cattle is valued at its fair value, recognizing a profit or loss from the increase or decrease of the herd.

The sugarcane and coffee plantations are initially registered at cost, which is considered as fair value because it has not had a significant biological transformation. Afterwards, it is measured at fair value, less the costs at point of sale.

Forest plantations are valued at fair value through a methodology that considers the different conditions of the plantations, according to their diameters, plantation management, density, topography, quality of sites, and on the basis of lots measured every year.

In order to determine fair value, biological assets are separated by age and type, calculating the expected present value of the net cash flows by biological asset, in their current condition and location.

- l. **Temporarily Restricted Net Assets** - Funds contributed by national or international organizations to establish the Agreement Funds, Funds in Custody, and Administered Funds, for the execution of agreements, contracts, or specific activities are recorded as temporarily restricted net assets. As they are used in the activities defined in the agreements and contracts, CATIE simultaneously recognizes such amounts as income released from restrictions and as expenses of the Agreement Fund and Funds in Custody in the statement of activities.

When the expenses incurred by CATIE in the execution of an agreement, contract, or specific activity exceed the respective contributions, the excess is recorded as an account receivable from the respective donor.

- m. **Employees' Legal Benefits** - According to the Costa Rican labor law, employees that are dismissed without just cause are entitled to severance pay, equivalent to 20 days of salary for each year of continuous service, with a limit of eight years. However, on December 23, 1998, CATIE, along with a Permanent Employee Committee, agreed that severance pay should be recognized as an actual right and not as an expectation by law. The main clauses of such agreement were the following:

- Since January 1999, CATIE monthly deposits 8.33% of salaries and benefits paid in the Fideicomiso de Cesantía del Personal Nacional del CATIE (Trust for Severance Pay of CATIE's Local Employees), which is administered by the investment fund administration company of Banco Popular y Desarrollo Comunal. As of March 2001, 3% of this provision is transferred to different pension funds selected by employees. Starting in February 2012, 5.33% of severance is deposited in Asociación Solidarista de Empleados (ASOCATIE) (CATIE's Employee Fund), in behalf of the associated employees.
- From September to December 2016, a massive employment termination process was applied for staff from Costa Rica. The objective was to reduce staff costs, and along with the Permanent Workers Committee, it was agreed to eliminate additional employee benefits to the 3% law of the Labor Compensation Fund (FOCOPEN), five-year bonuses, as well as annual payments for seniority.
- Funds corresponding to severance, plus the accumulated yield, will be returned to each employee only at the moment of leaving CATIE, regardless of the reason of their exit.

For employees working in countries where CATIE has offices, the policy of directly charging expenses and provisioning employees' legal benefits is followed.

- n. **Income Recognition** - CATIE follows the policy of recording all annual fees from member countries and IICA's annual contribution as income of the year. Revenue from managing goods and services is recognized as the services are rendered. Income from commercial activities is recognized when CATIE has transferred to the buyer all risks and benefits of the goods or products.
- o. **Contributions to the International Professional Staff Retirement Fund** - Pursuant to the provisions of the employment agreements of the international professional staff, CATIE and the professionals must jointly contribute to a retirement fund. According to Resolution No.9-94/VII ROJD of the VII Regular Meeting of CATIE's Board of Directors, the monthly contributions to cover

expected disbursements of this Retirement Fund are transferred by CATIE to *Morgan Stanley Investment Funds* and to the OAS Retirement Fund. The management of such funds is the sole responsibility of the international professional staff.

- p. **Use of Estimates** - In preparing the financial statements, Management has to make estimates that affect the reported amounts of certain assets and liabilities, as well as of other income and expenses shown in the financial statements. Actual results could vary from such estimates. Estimates made by management include estimates for impairment of other countries' fees, useful life of property, furniture, bearer plants and equipment, and labor liabilities.
- q. **Vacation** - The Costa Rican laws establish that for each year of work, employees are entitled to certain number of vacation days. The Entity registers on a monthly basis a provision to cover future disbursements for this concept.
- r. **Applicable Regulations of the Financial Accounting Standards No.117, Issued by the American Institute of Certified Public Accountants of the United States of America** - CATIE has adopted certain guidelines of the Financial Accounting Standard No.117. This principle establishes general standards for the presentation of the financial statements and the basic financial information of the not-for-profit organizations.
- s. **Intangible Assets** - Intangible assets with defined useful life and separately acquired are registered at cost less the accumulated amortization and any accumulated impairment loss. Amortization is recognized using the straight-line method on their estimated useful life. The estimated useful life and depreciation method are reviewed at the end of each reporting period, and the effect of any change in the estimate is registered on a prospective basis. Intangible assets with an indefinite useful life that are acquired separately are registered at cost less any accumulated impairment loss.

2. CASH AND CASH EQUIVALENTS

Cash and cash equivalents as of December 31 are detailed below:

	2018	2017
Petty cash	US\$ 11	US\$ 11
Cash due from banks	<u>4,612</u>	<u>3,243</u>
Sub-total	4,623	3,254
Cash and cash equivalents:		
In US dollars:		
Banco BCT, certificates of time deposit, in quetzales, interest rate of 1.5% per annum, with maturity in March 2018		601
Banco BCT, certificates of time deposit, in US dollars, annual interest rate of 2.3%, with maturity in March 2019	<u>140</u>	
Total	<u>US\$4,763</u>	<u>US\$3,855</u>

3. FINANCIAL INVESTMENTS AT MATURITY

Financial investments at maturity as of December 31 are detailed below:

	2018	2017
Banco G&T Continental, certificates of time deposit, in quetzales, interest rate of 5.75% per annum (6.00% in 2017) per annum, with maturity in March 2018	US\$ 64	US\$ 68
Banco de América Central, certificates of time deposit, in US dollars, annual interest rate of 2.25%, maturity in April 2019	9	9
Banco BCT, certificates of time deposit, in quetzales, interest rate of 2.3% per annum, with maturity in March 2018	25	183
Banco BCT, certificates of time deposit, in US dollars, annual interest rate of 3%, maturity in April 2019		
Banco BCT, certificates of time deposit, in US dollars, annual interest rate of 3.77%, maturity in December 2019	328	
Banco BCT, certificates of time deposit, in US dollars, annual interest rate of 2.10%, with maturity in February 2019	<u>20</u>	
Total	<u>US\$446</u>	<u>US\$260</u>

4. ACCOUNTS RECEIVABLE

Accounts receivable as of December 31 are detailed below:

	Note	2018	2017
Trade		US\$ 520	US\$ 577
Staff		21	27
Fundatrópicos interest		127	122
Advance payments for the development of projects		6	145
Member country fees		3,261	3,905
Third-party payments for the benefit of agreements	1/	715	468
Third-party payments for the benefit of funds in custody	1/	789	845
Others		<u>16</u>	<u>18</u>
Sub-total		5,455	6,107
Less: Allowance for impairment		<u>(3,330)</u>	<u>(2,977)</u>
Total		<u>US\$ 2,125</u>	<u>US\$ 3,130</u>

Accounts receivable from countries correspond to fees not paid to the Entity by member countries, which were established for the implementation of basic activities and are classified as unrestricted funds. Accounts receivable are recovered in the functional currency of the financial statements, are not subject to any discount, and do not bear interest.

A detail of the movement of the allowance for impairment is shown below:

	2018	2017
Balance at the beginning of the year	US\$2,977	US\$2,637
Recovery of estimated accounts	(831)	(60)
Adjustment from Adoption of IFRS 9	936	
Increase in the allowance	<u>248</u>	<u>400</u>
Balance at the end of the year	<u>US\$3,330</u>	<u>US\$2,977</u>

As of December 31, 2018, doubtful accounts for the sum of US\$73, corresponding to the custody fund, were directly recognized to the expense.

The ageing of accounts receivable from countries is as follows:

	2018	2017
Fees in arrears for less than a year	US\$ 364	US\$ 464
Fees in arrears between one and two years	928	464
Fees in arrears for more than two years	<u>1,969</u>	<u>2977</u>
Total	<u>US\$3,261</u>	<u>US\$3,905</u>

During 2018, CATIE adopted International Financial Reporting Standard 9: Financial Instruments, which is why the following effects are presented in the financial statements as of December 31, 2018, considering that the administration made the decision to adopt it prospectively, as established by the norm:

Detail	Balance
Adjustment according IRFS 9 – previous period	US\$ 936
Adjustment IFRS 9 2018	<u>210</u>
Total	<u>US\$1,146</u>

5. INVENTORIES

Inventories as of December 31 are as follows:

	2018	2017
Coffee at coffee mill	US\$ 21	US\$ 53
Forest seed bank	254	238
Materials and supplies	67	63
Others	<u>17</u>	<u>16</u>
Total	<u>US\$359</u>	<u>US\$370</u>

Due to the infrastructure and physical conditions where the inventories are stored and their non-perishable nature, Management considers that there will be a low risk and likelihood of incurring in losses due to the obsolescence or low turnover of the inventories; therefore, it is not appropriate to keep an allowance for obsolescence or slow turnover.

6. BIOLOGICAL ASSETS

Biological assets consist of dairy cattle, coffee plantations, sugarcane, and wood.

Biological assets are as follows:

	2018	2017
Coffee		
Sugarcane		
Wood	US\$174	US\$145
Cattle	<u>263</u>	<u>272</u>
Total	<u>US\$437</u>	<u>US\$417</u>

A summary of the movement of the account of biological assets is shown below:

	2018	2017
Balance at the beginning of the year	US\$417	US\$ 896
Capitalizations	11	30
Adjustments from a change in the fair value	18	37
Loss in disposal of biological assets	(9)	(15)
Adjustments from change in the application of the standard		<u>(531)</u>
Balance at the end of the year	<u>US\$437</u>	<u>US\$ 417</u>

A detail of purchases and births, sales and deaths and valuation adjustments of cattle is as follows:

	Heads of Cattle	Cost
Balances as of December 31, 2016	US\$ 256	US\$236
Purchases and births	180	
Sales and deaths	(146)	
Adjustment for valuation		<u>36</u>
Balances as of December 31, 2017	290	272
Purchases and births	185	
Sales and deaths	(132)	
Adjustment for valuation		<u>(9)</u>
Balances as of December 31, 2018	<u>US\$ 343</u>	<u>US\$263</u>

As of December 31, 2018, CATIE had a dairy herd of 193 milk-producing cows (of these, there are 155 producing milk and 38 in rest period). There are also 98 heifers, 8 of them will soon give birth for the first time and 90 are in development stage. There are 40 breeding heifers, from which 15 heifers were bred in 2017 and 25 heifers in 2018, with the purpose of producing a breeding herd using dairy cow wombs crossed with beef semen. In addition, there 3 breeding bulls for artificial insemination. CATIE produced, in the year ended December 31, 2018, 879.280 milk kilograms, with a reasonable value less the estimates costs in the point of sale of US\$0.68 for each kilogram (value determined at the time of milking).

As of December 31, CATIE has the following plantations:

	Number of Planted Hectares	
	2018	2017
Wood	<u>147</u>	<u>147</u>
Total	<u>147</u>	<u>147</u>

7. TRUST FUNDS

Trust funds as of December 31 are as follows:

	2018	2017
Contributions to the trust:		
COSUDE II/Fundatrópicos Funds	<u>US\$1,570</u>	<u>US\$1,640</u>

FUNDATROPICOS-CATIE-BCT/2014 Investment Fund Management Trust ("the Trust") was created on May 23, 2014 by the Foundation for Education and Research in the Development and Conservation of Natural Resources in the American Tropics (FUNDATROPICOS) and the Tropical Agriculture Research and Training Center (CATIE) (Trustors), Banco BCT, S.A., (the Trustee) and the Tropical Agriculture Research and Training Center (CATIE) (the Beneficiary). The trust is organized in accordance with the laws of Costa Rica for the management of money, securities, and loans.

The trust is the result of a merger of four trusts: COSUDE I Fundatrópicos Trust, COSUDE II Fundatrópicos Trust and Fundatrópicos Trust, all managed by Banco BCT, S.A, FUNDATROPICOS-CATIE-BCT/2014 Fund and Investment Management Trust, and the last one prevails, which objective is to fund the financial self-sustainability of CATIE, with the development and implementation of research activities, as well as education and other educational activities in the area of agricultural sciences, renewable resources, and other related activities.

Fundatrópicos' interest in the total balance of net assets in the Trust as of December 31, 2018 is for the sum of US\$12.089 (thousands), (US\$11.231 thousands in 2017), equivalent to 87.01% (87.26% in 2017), and CATIE's interest is for the sum of US\$1,570 (thousands) (US\$1,640 thousands in 2017) equivalent to 12.99% (12.74% in 2017).

Fundatrópicos through an agreement with the Administrative Board and CATIE might give joint instructions so that, from the net assets of the Trust but not from its returns, payments are made to third parties that have been related to the Trust's management.

The 8-14/XXVIII and 2-13/extraordinary meetings' resolutions by the Administrative Board of Fundatrópicos approved allocating to CATIE 85% of the yields generated by the Trust and capitalizing the remaining 15%. CATIE recognized income amounting to US\$619,000 and US\$614,000 in 2017 and 2016, respectively.

8. PROPERTY, FURNITURE, BEARER PLANTS AND EQUIPMENT - NET

Property, furniture, bearer plants and equipment as of December 31, 2017, are as follows:

	2018				2018
	2017	Additions	Disposals	Transfers And Adjustments	
Historical cost:					
Lands	US\$ 483				US\$ 483
Buildings	6,994		US\$ (7)		6,987
Machinery	656	US\$ 99	(225)		530
Vehicles	1,291	369	(440)		1,220
Office furniture and equipment	655	20	(306)		369
Residence furniture and equipment	258	17	(138)		137
Lab equipment	294	2	(170)		126
Computer equipment	1,063	67	(620)		510
Agriculture plantations	<u>571</u>				<u>571</u>
Sub-total	<u>12,265</u>	<u>574</u>	<u>(1,906)</u>		<u>10,933</u>
Accumulated depreciation:					
Buildings	(3,883)	(141)	7		(4,017)
Machinery	(391)	(45)	225		(211)
Vehicles	(732)	(101)	396	US\$(12)	(449)
Office furniture and equipment	(454)	(45)	303		(196)
Residence furniture and equipment	(190)	(13)	138		(65)
Lab equipment	(207)	(13)	170		(50)
Computer equipment	(815)	(85)	611		(289)
Agriculture plantations	<u>(83)</u>	<u>(80)</u>	<u>1</u>		<u>(162)</u>
Sub-total	<u>(6,755)</u>	<u>(523)</u>	<u>1,851</u>	<u>(12)</u>	<u>(5,439)</u>
Total	<u>US\$ 5,510</u>	<u>US\$ 51</u>	<u>US\$ (55)</u>	<u>US\$(12)</u>	<u>US\$ 5,494</u>

Property, furniture, bearer plants and equipment as of December 31, 2017, are as follows:

	2017				2017
	2016	Additions	Disposals	Transfers And Adjustments	
Historical cost:					
Lands	US\$ 483				US\$ 483
Buildings	6,994				6,994
Machinery	645	US\$ 28	US\$ (17)		656
Vehicles	1,338	42	(89)		1,291
Office furniture and equipment	677	17	(39)		655
Residence furniture and equipment	258	8	(8)		258
Lab equipment	295		(1)		294
Computer equipment	1,076	55	(68)		1,063
Agriculture plantations		<u>40</u>		<u>US\$531</u>	<u>571</u>
Sub-total	<u>11,766</u>	<u>190</u>	<u>(222)</u>	<u>531</u>	<u>12,265</u>
Accumulated depreciation:					
Buildings	(3,742)	(141)			(3,883)
Machinery	(361)	(46)	16		(391)
Vehicles	(642)	(112)	37	(15)	(732)
Office furniture and equipment	(445)	(42)	33		(454)
Residence furniture and equipment	(185)	(12)	7		(190)
Lab equipment	(195)	(13)	1		(207)
Computer equipment	(783)	(96)	64		(815)
Agriculture plantations		<u>(83)</u>			<u>(83)</u>
Sub-total	<u>(6,353)</u>	<u>(545)</u>	<u>158</u>	<u>(15)</u>	<u>(6,755)</u>
Total	<u>US\$ 5,413</u>	<u>US\$(355)</u>	<u>US\$ (64)</u>	<u>US\$516</u>	<u>US\$ 5,510</u>

Donations corresponding to machinery, vehicles, furniture, and equipment were received, which amounted to the sum of US\$138 and US\$96 as of the years ended December 31, 2018 and 2017, respectively. Such donations come from the Agreement

Fund, which amount to US\$85 and US\$27 for 2018 and 2017, respectively, from the Custody Fund, for the sums of US\$53 and US\$69 for 2017 and 2016, respectively. The previously mentioned transactions did not use or generate any cash.

For 2017, due to the change in the IFRS regarding biological assets (specifically bearing plants), biological assets were reclassified for the sum of US\$531 to the fixed assets account. This transaction did not use or generate any cash.

As of December 31, CATIE has the following plantations:

	Number of Planted Hectares	
	2018	2017
Coffee	20	20
Sugarcane	<u>151</u>	<u>151</u>
Total	<u>171</u>	<u>171</u>

The value of coffee and sugarcane was transferred to property, furniture, and equipment since these correspond to bearing plants based on International Accounting Standard No. 16.

During 2018, CATIE produced 279 coffee fanegas, from which 157 were harvested at Finca Comercial and the remaining 122 were harvested from the different areas of cops in the experimental farm, for a price of US\$79.35, once the estimated costs in points of sale are reduced (amount determined in the harvesting moment.)

Also, during 2018, 10,460 tons of sugarcane were harvested at a selling price of US\$41 per ton, once the estimated costs in point of sale were reduced (amount determined at cutting time.)

As of December 31, 2018, 20 coffee hectares are in productive age, and 150 sugarcane hectares are in cutting age. From 147 hectares planed with wood, 129.64 are in growing stage, 17.4 recently established (less than 5 year)

As of December 31, 2018, there are 32 sugarcane hectares which sugar harvests until 2019 have been granted as guarantee for the debt transaction existing with Hacienda Juan Viñas (see Note 11)

9. OTHER ASSETS

Other assets as of December 31 are as follows:

	2018	2017
Contribution certificates, Cooperativa de Productores de Leche, R.L. in colones	US\$644	US\$484
Security deposit, office lease in Bolivia, Guatemala and Peru	33	33
Performance bond deposits in El Salvador, Panama, Costa Rica and Nicaragua	44	41
Others	<u>140</u>	<u>61</u>
Total	<u>US\$861</u>	<u>US\$619</u>

The performance bond deposits correspond to deposits given as guarantee of several projects. During the 2018 period the company adopted IFRS 9: Financial Instruments (Note 15), so the milk contribution certificates are valued at fair value with changes in results; The effect of that valuation as of December 31, 2018 is US\$173.

10. ACCRUED EXPENSES AND OTHER ACCOUNTS PAYABLE

The accumulated expenses and other accounts payable as of December 31 are as follows:

	2018	2017
Miscellaneous projects	US\$241	US\$ 328
Withholdings	58	58
Accumulated expenses	60	60
Funds in custody	158	190
Interest payable	1	2
Security deposits – bids	10	4
Accounts payable OTN	78	38
Provision for audits	31	18
Others	<u>236</u>	<u>353</u>
Total	<u>US\$873</u>	<u>US\$1,051</u>

11. LONG-TERM DEBT

Long-term debt as of December 31 is as follows:

	2018	2017
FUNDATRÓPICOS, 7.75% interest per annum, maturity in September 2019 in dollars, surety bond	US\$ 47	US\$133
FUNDATRÓPICOS, 3.00% interest per annum, Maturity in September 2033, in dollars, surety bonds, first 3 years only interest is paid	333	333
FUNDATRÓPICOS, annual interest of 6.50%, maturity in September 2023, in dollars surety bond	338	
Hacienda Juan Viñas, S.A., 6% interest per annum, maturity on June 20, 2019, in dollars, guarantee against sugarcane harvest 2017-2019	<u>6</u>	<u>13</u>
Sub-total	724	479
Less: Current portion of long-term debt	<u>(134)</u>	<u>(97)</u>
Net	<u>US\$590</u>	<u>US\$382</u>

A detail of the long-term debt maturities is as follows:

Year ended:	2018	2017
Until one year	US\$134	US\$ 97
From one to five years	398	89
After five years	<u>192</u>	<u>293</u>
Total	<u>US\$724</u>	<u>US\$479</u>

To grant loans, FUNDATRÓPICOS used funds of the FUNDATROPICOS-CATIE-BCT/2014 trust.

12. EMPLOYEE BENEFITS

CATIE's employee benefits are defined in the staff regulations for professional international and national staff. These regulations govern not only employee's duties and rights, but also a series of benefits determined by the institutional authorities. Based on the framework about the benefits defined by CATIE, the costs of these benefits for CATIE are assessed.

12.1 RECOGNITION OF YEARS OF SERVICE

CATIE operates this benefit solely for its international staff and it is estimated based on the following weeks in terms of the years of service:

Years of Continuous Service	Weeks to be Paid
02	08
03	10
04	12
05	14
06	16
07	18
08	20
09	22
10	24
11	26
12	28
13	30
14	32
15 or more	34

The present value of the liability from the recognition of the years of service is calculated in terms of the last base salary of the participants. Therefore, an increase in the salary of participants of the plan will increase the plan's liability.

There is a subsidiary ledger with individual accounts by employee. The benefit is paid at the end of the employment relationship to employees with two years of continuous service at CATIE. Total expense recognized in the comprehensive statement of activities was US\$69,000 in 2018 and US\$70,000 in 2017. Moreover, CATIE recognized payments and adjustments for US\$99,000 in 2018 and US\$167,000 in 2017.

12.2 REPATRIATION AND TRAVEL TO HOME COUNTRY

CATIE covers the following expenses at the end of the employment agreements of international professional staff:

- a. Travel expenses of the employee and dependent family members to their home country according to the airfare at the time of travel.
- b. Moving expenses of household goods up to an amount of US\$6,000.
- c. A lump sum of US\$2,750.

For this benefit, there is also a subsidiary ledger with individual accounts per employee. The benefit is paid at the end of the employment relationship to employees with two years of continuous service at CATIE. Total expense recognized in the comprehensive statement of activities was US\$ 94,000 in 2018 and US\$111,000 in 2017. Moreover, CATIE recognized payments and adjustments for US\$126,000 in 2018 and US\$162,000 in 2017.

12.3 VACATION FOR NATIONAL STAFF

From September to December 2016, CATIE dismissed and rehired the national staff at the main campus as part of a downsizing process thereby eliminating some employee benefits; as a result of this process, all the staff had to take the accumulated vacation days before the liquidation date, which resulted in the labor liability balance from vacations as of December 31, 2016 to be used entirely; the balance of this benefit became a debt as of December 31, 2017 because the collective vacation days were taken at the end of the year, thereby representing an account receivable from employees for US\$0 and a labor liability for US\$22,000 in 2017. In 2018, this labor liability amounts to US\$19,000.

12.4 SEVERANCE PAY OF NATIONAL STAFF

The severance pay of the national staff is paid in accordance with the laws in each country. For the Costa Rican employees who are not members of the Employees' Association, CATIE transfers 5.33% of the monthly severance pay to SAFI Banco Popular.

For the remaining countries, CATIE monthly charges the amount of the severance pay to expenses and they are provisioned. CATIE is legally liable for this employee benefit which is recognized for each country as follows.

Country	Calculation Method
Honduras and Guatemala	Salaries earned in the last six months, or a fraction of shorter time, including overtime, salary in kind, usual bonuses, or any other salary, if any. The result is multiplied times 14 months (including 50% of the 13th and 14th month) and then divided by 12 months to obtain the average salary for the compensation.
El Salvador	One salary is recognized per each year of service or a fraction of a shorter time, with a maximum of 4 minimum salaries per year for an estimated amount of US\$251,70 in 2015, and the maximum annual compensation was US\$1,006.80.
Nicaragua	Law No.185 was approved on September 5, 1996. One month of salary for each of the first 3 years of work, and 20 days of salary for each year of work, starting on the fourth year of work. Under no circumstance, compensation will be less than one month or more than five months. Fractions between years served will be liquidated on a proportional basis.
Panama	Severance pay or the seniority bonus is calculated based on one week of salary per each year of service (1/52).

The most recent actuarial assessment of the obligation from the aforementioned benefits was conducted on December 31, 2017 by Luis Guillermo Fernández Valverde, Mathematician-Actuary, consultant, and founding member of the Costa Rican Association of Actuaries, member No.8963.

The present value of the obligation from the aforementioned benefits and the cost of the current service and past service were measured using the credit method of the foreseen Unit.

The fair value of the employee benefits according to the results of the actuarial study and the amounts of the employee benefits of CATIE as of December 31 are as follows:

2018						
Benefit	Country	Local Currency (in Thousands)	Exchange Rate	Actuarial Value (in Thousands US\$)	Total CATIE (in Thousands US\$)	Difference (in Thousands US\$)
Staff's severance pay	Costa Rica	213,398	604	353	0	(353)
	Guatemala	751	8	97	28	(69)
	Honduras	511	24	21	15	(6)
	Nicaragua	914	33	28	21	(7)
	Panamá	16	1	16	4	(12)
	México	54	19	3	12	9
	El Salvador	0	1	0	10	10
	Subtotal			518	90	(428)
Years of service and repatriation	Costa Rica	285	1	285	359	74
	Costa Rica	34	1	34	111	77
	Subtotal			319	470	151
Severance Transferred to Asocatie and SAFI						367
Total				837	560	90

2017						
Benefit	Country	Local Currency (in Thousands)	Exchange Rate	Actuarial Value (in Thousands US\$)	Total CATIE (in Thousands US\$)	Difference (in Thousands US\$)
Staff's severance pay	Costa Rica	96,718	574	168	0	(168)
	Guatemala	2,767	7.34	377	129	(248)
	Honduras	1,155	23.63	49	10	(39)
	Nicaragua	1,236	30.99	40	36	(4)
	Panamá	14	1	15	4	(11)
	El Salvador	87	1	87	53	(34)
	Subtotal				736	232
Years of service and repatriation	Costa Rica	226	1	226	389	163
	Costa Rica	15	1	15	143	128
	Subtotal			241	532	291
Total				977	764	(213)

Reconciliation of employee benefits at December 31 is as follows:

	Year 2018	Year 2017
International staff provision	US\$470	US\$532
Labor provisions	<u>90</u>	<u>232</u>
Total	560	764
Severance provision at foreign entities	<u>367</u>	<u>213</u>
Total	<u>927</u>	<u>977</u>
Balances as actuary:		
International staff provision	319	241
Labor provisions	<u>518</u>	<u>736</u>
Total	<u>837</u>	<u>977</u>
Net actuarial variation	<u>US\$ 90</u>	<u>US\$</u>

13. FINANCIAL INSTRUMENTS

A summary of the main disclosures regarding CATIE's financial instruments is as follows:

13.1 SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies and methods approved, including the recognition criteria, the measurement basis, and the basis on which income and expenses are recognized for each type of financial asset, financial liability, and capital instrument are discussed in Note 1 to the financial statements.

13.2 FINANCIAL INSTRUMENT CATEGORY

The classification of financial instruments is as follows:

	2018	2017
Cash and cash equivalents and investments	US\$5,209	US\$4,115
Financial assets:		
Accounts receivable	<u>1,083</u>	<u>1,672</u>
Total	<u>US\$6,292</u>	<u>US\$5,787</u>
Financial liabilities at amortized cost:		
Accounts and notes payable	<u>US\$1,281</u>	<u>US\$1,214</u>
Total	<u>US\$1,281</u>	<u>US\$1,214</u>

13.3 LEVERAGE RISK MANAGEMENT

CATIE manages its net asset structure to maximize funds by optimizing the fund and debt balance. The capital structure used consists of debt, cash, and funds. The leverage ratio is as follows:

	2018	2017
Loans and notes payable	US\$ 1,281	US\$ 1,214
Cash and cash equivalents	<u>(5,209)</u>	<u>(4,115)</u>
Available net cash	<u>US\$(3,928)</u>	<u>US\$(2,901)</u>
Net assets	<u>US\$13,819</u>	<u>US\$13,469</u>
Leverage ratio	<u>(28%)</u>	<u>(22%)</u>

13.4 EXCHANGE RATE RISK

CATIE performs transactions denominated in foreign currency, and therefore, it is exposed to the risk of exchange rate fluctuations in the quotes of these currencies regarding the US dollar, affecting its activities, financial position, and cash flows. CATIE does not have any spread agreements to mitigate such risk.

The balances of assets and liabilities denominated in foreign currencies in thousands are as follows:

	2018								
	Colones	Quetzales	Lempiras	Córdoba	Euros	US Dollar	Dominican Peso	Bolivian Peso	Peruvian Sol
Assets:									
Cash and cash equivalents	¢ 47,830	Q 1,987	L 164	C\$ 110	€670	BZ\$ 15	RD\$2,709	BS\$1	S/22
Financial investments		498							
Accounts receivable	5,652	8	102						
Other assets	<u>348,610</u>								
Total assets	402,092	2,493	266	110	670	15	2,709	1	22
Liabilities:									
Accounts payable and accrued expenses	<u>(149,396)</u>	<u>Q(497)</u>	<u>(428)</u>	<u>C\$(2,694)</u>		<u>BZ\$(1)</u>			
Net position (exposure) in thousands	¢ <u>252,696</u>	<u>Q1,996</u>	<u>L(162)</u>	<u>C\$2,584</u>	<u>€670</u>	<u>BZ\$14</u>	<u>RD\$2,709</u>	<u>BS\$1</u>	<u>S/22</u>

	2017								
	Colones	Quetzales	Lempiras	Córdoba	Euros	US Dollar	Dominican Peso	Bolivian Peso	Peruvian Sol
Assets:									
Cash and cash equivalents	¢ 26.864	Q 3,957	L 462	C\$ 202	€807	BZ\$ 9	RD\$43	BS\$1	S/21
Financial investments		498							
Accounts receivable	38,930	90	29						
Other assets	<u>307,591</u>								
Total assets	<u>373,385</u>	<u>4,545</u>	<u>491</u>	<u>202</u>	<u>807</u>	<u>9</u>	<u>43</u>	<u>1</u>	<u>21</u>
Liabilities:									
Accounts payable and accrued expenses	<u>(144.877)</u>	<u>(1,097)</u>	<u>(394)</u>	<u>(1,697)</u>		<u>(1)</u>			
Net position (exposure) in thousands	¢ <u>228,508</u>	<u>Q 3,448</u>	<u>L 97</u>	<u>C\$(1,495)</u>	<u>€807</u>	<u>BZ\$ 8</u>	<u>RD\$43</u>	<u>BS\$1</u>	<u>S/21</u>

Foreign Exchange Sensitivity Analysis - The following itemization shows the sensitivity to a decrease or increase in the exchange rate, 5% is the sensitivity rate used by management and represents the best estimate of a variation in the exchange rate.

Sensitivity to an Increase / Decrease in the Exchange Rate -

	2018								
	Colones	Quetzales	Lempiras	Córdoba	Euros	Belize Dollar	Dominican Peso	Bolivian Peso	Peruvian Sol
Net position (exposure) in thousands	<u>¢252,695</u>	<u>Q1,996</u>	<u>L (162)</u>	<u>C\$(2,583)</u>	<u>€ 670</u>	<u>Bz\$ 15</u>	<u>RD\$2,709</u>	<u>Bs 1</u>	<u>S/ 22</u>
Closing exchange rate	<u>604.39</u>	<u>7.74</u>	<u>24.34</u>	<u>32.33</u>	<u>0.87</u>	<u>2.00</u>	<u>50.09</u>	<u>6.86</u>	<u>3.37</u>
Net position in thousands of dollars	<u>US\$ 418</u>	<u>US\$ 258</u>	<u>US\$ (7)</u>	<u>US\$ (80)</u>	<u>US\$760</u>	<u>US\$ 7</u>	<u>US\$ 54</u>	<u>US\$ 0</u>	<u>US\$ 7</u>
5% increase (loss) profit	<u>US\$ 20</u>	<u>US\$ 12</u>	<u>US\$</u>	<u>US\$ (4)</u>	<u>US\$ 36</u>	<u>US\$</u>	<u>US\$ 3</u>	<u>US\$</u>	<u>US\$</u>
Decrease of 5% profit (loss)	<u>US\$ (22)</u>	<u>US\$(14)</u>	<u>US\$</u>	<u>US\$ 4</u>	<u>US\$ (40)</u>	<u>US\$</u>	<u>US\$ (3)</u>	<u>US\$</u>	<u>US\$</u>

	2017								
	Colones	Quetzales	Lempiras	Córdoba	Euros	Belize Dollar	Dominican Peso	Bolivian Peso	Peruvian Sol
Net position (exposure) in thousands	<u>¢228,508</u>	<u>Q 3,448</u>	<u>L 97</u>	<u>C\$(1,495)</u>	<u>€ 807</u>	<u>Bz\$ 8</u>	<u>RD\$46.43</u>	<u>Bs 1</u>	<u>S/ 21</u>
Closing exchange rate	<u>566.42</u>	<u>7.34</u>	<u>23.59</u>	<u>30.78</u>	<u>0.83</u>	<u>2.00</u>	<u>48.25</u>	<u>6.91</u>	<u>3.24</u>
Net position in thousands of dollars	<u>US\$ 403</u>	<u>US\$ 470</u>	<u>US\$ 4</u>	<u>US\$ (49)</u>	<u>US\$972</u>	<u>US\$ 4</u>	<u>US\$ 1</u>	<u>US\$</u>	<u>US\$6</u>
5% increase (loss) profit	<u>US\$ 19</u>	<u>US\$ 22</u>	<u>US\$</u>	<u>US\$ (2)</u>	<u>US\$ 46</u>	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>
Decrease of 5% profit (loss)	<u>US\$ (21)</u>	<u>US\$ (25)</u>	<u>US\$</u>	<u>US\$ 3</u>	<u>US\$ (51)</u>	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>

13.5 CREDIT RISK

The financial instruments subject to the credit risk mainly include cash and cash equivalents, investments and accounts receivable.

Cash and cash equivalents and investments are held in strong financial institutions and pose a minimum risk. The credit risk in the accounts receivable is deemed high because payments of member country fees entail significant political factors. CATIE monitors past-due balances.

CATIE has applied the simplified approach in IFRS 9 to measure the estimate for losses in the expected credit loss. CATIE determines the expected credit losses in these items using a provision matrix, estimated based on the historical experience of credit losses based on the past due status of the debtors, adjusted as appropriate to reflect current conditions and estimates of economic future conditions. As a result, the credit risk profile of these assets is presented based on their matured status in terms of the provision matrix.

A description of aged fees is shown in Exhibit 2 of the supplementary information.

13.6 LIQUIDITY RISK

The management of CATIE manages the liquidity risk by keeping adequate cash reserves. Moreover, CATIE constantly monitors its cash flows and the matched maturity analysis, which pays a timely attention to the short-term and medium-term obligations. CATIE prepares an annual budget and gives a constant follow up to the cash balances.

The foreseen recovery of financial assets as of December 31, 2018 is as follows:

Financial Assets	Effective Rate	Less than 1 Month	From 1 to 3 Months	From 3 Months to 1 Year	More than 1 Year	Total
Interest-bearing instruments	Between 0,01% and 4% per annum	4,847	-	353	9	5,209
Non interest-bearing instruments		<u>68</u>	<u>544</u>	<u>354</u>	<u>117</u>	<u>1,083</u>
Total		<u>4,915</u>	<u>544</u>	<u>707</u>	<u>126</u>	<u>6,292</u>

The scheduled payments of the financial liabilities as of December 31, 2018 are as follows:

Financial Liabilities	Effective Rate	Less than 1 Month	From 1 to 3 Months	From 3 Months to 1 Year	More than 1 Year	Total
Interest-bearing obligations	Between 6% and 7.75% per annum	US\$ 15	US\$ 24	US\$ 96	US\$590	US\$ 725
Non interest-bearing obligations		<u>140</u>	<u>239</u>	<u>70</u>	<u>106</u>	<u>555</u>
Total		<u>US\$155</u>	<u>US\$263</u>	<u>US\$166</u>	<u>US\$696</u>	<u>US\$1,280</u>

The foreseen recovery of financial assets as of December 31, 2017 is as follows:

Financial Assets	Effective Rate	Less than 1 Month	From 1 to 3 Months	From 3 Months to 1 Year	More than 1 Year	Total
Interest-bearing instruments	Between 0,01% and 4% per annum	US\$3,855	US\$ 68	US\$ 184	US\$8	US\$4,115
Non interest-bearing instruments		<u>306</u>	<u>355</u>	<u>1,011</u>		<u>1,672</u>
Total		<u>US\$4,161</u>	<u>US\$423</u>	<u>US\$1,195</u>	<u>US\$8</u>	<u>US\$5,787</u>

The scheduled payments of the financial liabilities as of December 31, 2017 are as follows:

Financial Liabilities	Effective Rate	Less than 1 Month	From 1 to 3 Months	From 3 Months to 1 Year	More than 1 Year	Total
Interest-bearing obligations	Between 6% and 7.75% per annum		US\$ 30	US\$66	US\$382	US\$ 478
Non interest-bearing obligations		<u>US\$450</u>	<u>262</u>	<u>23</u>	<u>1</u>	<u>736</u>
Total		<u>US\$450</u>	<u>US\$292</u>	<u>US\$89</u>	<u>US\$383</u>	<u>US\$1,214</u>

13.7 INTEREST RATE RISK

CATIE has loan obligations that generate fixed interest rates; therefore, it is not subject to fluctuating interest rates.

13.8 FAIR VALUE OF FINANCIAL INSTRUMENTS

The estimates of the market fair value are carried out at a specific period of time and are based on relevant market information and information related to the financial instruments. These estimates do not reflect any premium or discount that might result from selling a financial instrument at a given period.

The fair value of financial instruments traded in active markets is estimated based on market price quotations on the dates of the financial statements.

The fair value of the financial instruments not traded in active markets is based on valuation techniques and assumptions based on the market conditions on the dates of the financial statements.

These estimates are subjective and, by nature, they entail uncertainty and a lot of judgment; therefore, they cannot be determined accurately. Any changes to the assumptions and criteria might affect these estimates.

The accounts receivable and payable are assets and liabilities that were not derived from determined or fixed payments and are not quoted in an active market. It is assumed that their carrying amount, less the allowance for impairment, if any, is close to their fair value.

The market value of short-term financial assets and liabilities is close to their carrying amount, mainly due to their maturity.

The methods and assumptions used by CATIE to determine the market fair value of the financial instruments are as follows:

- a. **Cash, Cash Equivalents and Temporary Investments** - The carrying amount of these assets is close to their fair value due to their current nature.
- b. **Accounts Receivable and Payable** - The carrying amount of the financial liabilities in less than one year is close to their fair value due to their short-term nature. CATIE carries out estimates for accounts receivable at their fair value.
- c. **Long-Term Debt** - The estimated fair value of loans payable is estimated based on the discounted amount of the future estimated cash flows. The loan rates are set at market values; therefore, their carrying amount is close to their fair value.

14. OPERATING EXPENSES

According to their functional classification, as of December 31 expenses are detailed below:

	2018	2017
Higher Guidelines, Administrative and Finance and Strategic Services (Institutional Support)	US\$ 2,259	US\$ 2,104
Research Division (Research)	9,596	8,671
Education Division (Teaching)	2,979	2,734
Administrative and Finance Department - Commercial Component (Subsidiary Companies)	2,537	2,590
External Projection Division (Projection)	<u>6,539</u>	<u>9,245</u>
Total	<u>US\$23,910</u>	<u>US\$25,344</u>

15. ADOPTION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)

- a. **Application of New and Revised International Financial Reporting Standards (IFRS or IAS) that are Mandatory for the Current Year** - In the current year, CATIE applied a series of new and amended IFRS, issued by the International Accounting Standard Board ("IASB"), which are mandatory and became effective for the periods starting on or after January 1, 2018.

New and Amended IFRS that are in Effect for the Current Year

Impact of Initial Application of IFRS 9 - Financial Instruments - In the current year, CATIE has applied IFRS 9 *Financial Instruments* (as revised in July 2014) and the related consequential amendments to other IFRS Standards that are effective for an annual period that begins on or after 1 January 2018. The transition provisions of IFRS 9 allow an entity not to restate comparatives.

In addition, CATIE has adopted consequential amendments to IFRS 7 *Financial Instruments: Disclosures* that were applied to the disclosures for 2018 and to the period ended 2017.

IFRS 9 introduced new requirements for:

- The classification and measurement of financial assets and financial liabilities,
- Impairment of financial assets, and
- General hedge accounting.

Details of these new requirements as well as their impact on CATIE financial statements are described below.

CATIE has applied IFRS 9 in accordance with the transition provisions set out in IFRS 9.

- *Classification and Measurement of Financial Assets* - The date of initial application is January 1, 2018.

All recognized financial assets that are within the scope of IFRS 9 are required to be measured subsequently at amortized cost or fair value on the basis of the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets.

Specifically:

- i. Debt instruments that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured subsequently at amortized cost;
- ii. Debt instruments that are held within a business model whose objective is both to collect the contractual cash flows and to sell the debt instruments, and that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured subsequently at fair value through other comprehensive income (FVTOCI);

- iii. All other debt investments and equity investments are measured subsequently at fair value through profit or loss (FVTPL).

Despite the foregoing, CATIE may make the following irrevocable election/designation at initial recognition of a financial asset:

- CATIE may irrevocably elect to present subsequent changes in fair value of an equity investment that is neither held for trading nor contingent consideration recognized by an acquirer in a business combination in other comprehensive income; and
- CATIE may irrevocably designate a debt investment that meets the amortized cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

In the current year, CATIE has not designated any debt investments that meet the amortized cost or FVTOCI criteria as measured at FVTPL. When a debt investment measured at FVTOCI is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment. When an equity investment designated as measured at FVTOCI is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is subsequently transferred to retained earnings.

Debt instruments subsequently measured at amortized cost or fair value through other comprehensive income are subject to impairment. See subsection "Impairment of Financial Assets".

CATIE's management reviewed and assessed CATIE's existing financial assets as at 1 January 2018 based on the facts and circumstances that existed at that date. The application of the initial measurement and classification of IFRS 9 was made in the financial statements as of December 31, 2018 as an adjustment to retained earnings.

- *Impairment of Financial Assets* - In relation to the impairment of financial assets, IFRS 9 requires an expected credit loss model as opposed to an incurred credit loss model under IAS 39. The expected credit loss model requires CATIE to account for expected credit losses and changes in those expected credit losses at each reporting date to reflect changes in credit risk since initial recognition of the financial assets. In other words, it is no longer necessary for a credit event to have occurred before credit losses are recognized.

Specifically, IFRS 9 requires CATIE to recognize a loss allowance for expected credit losses on:

- i. Debt investments measured subsequently at amortized cost or at FVTOCI;
- ii. Lease receivables member countries;
- iii. Trade receivables and contract assets; and
- iv. Financial guarantee contracts to which the impairment requirements of IFRS 9 apply.

In particular, IFRS 9 requires CATIE to measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses (ECL) if the credit risk on that financial instrument has increased significantly since initial recognition, or if the financial instrument is a purchased or originated credit-impaired financial asset.

However, if the credit risk on a financial instrument has not increased significantly since initial recognition (except for a purchased or originated credit-impaired financial asset), CATIE is required to measure the loss allowance for that financial instrument at an amount equal to 12-months ECL. IFRS 9 also requires a simplified approach for measuring the loss allowance at an amount equal to lifetime ECL for trade receivables, contract assets and lease receivables in certain circumstances.

Since CATIE has elected to apply the initial recognition of the financial asset impairment only in the period ended December 31, the credit risk of the period ended December 31, 2017 is not comparable to 2018.

The consequential amendments to IFRS 7 have also resulted in more extensive disclosures about CATIE's exposure to credit risk in the consolidated financial statements (see notes for details).

- *Classification and Measurement of Financial Liabilities* - A significant change introduced by IFRS 9 in the classification and measurement of financial liabilities relates to the accounting for changes in the fair value of a financial liability designated as at FVTPL attributable to changes in the credit risk of the issuer.

Specifically, IFRS 9 requires that the changes in the fair value of the financial liability that is attributable to changes in the credit risk of that liability be presented in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. Changes in fair value attributable to a financial liability's credit risk are not subsequently reclassified to profit or loss, but are instead transferred to retained earnings when the financial liability is derecognized. Previously, under IAS 39, the entire amount of the change in the fair value of the financial liability designated as at FVTPL was presented in profit or loss.

This change in accounting policy has affected CATIE's accounting.

- *General Hedge Accounting* - The new general hedge accounting requirements retain the three types of hedge accounting. However, greater flexibility has been introduced to the types of transactions eligible for hedge accounting, specifically broadening the types of instruments that qualify for hedging instruments and the types of risk components of non-financial items that are eligible for hedge accounting. In addition, the effectiveness test has been replaced with the principle of an 'economic relationship'. Retrospective assessment of hedge effectiveness is also no longer required. Enhanced disclosure requirements about CATIE's risk management activities have also been introduced.

Since CATIE does not keep general hedge accounting contracts as of December 31, 2018 and 2017, the application of FRS 9 has not had an impact on the results and the financial position of CATIE for the current and/or prior years.

- *Disclosures in Relation to the Initial Application of IFRS 9* - There were no financial assets or financial liabilities which CATIE had previously designated as at FVTPL under IAS 39 that were subject to reclassification or which CATIE has elected to reclassify upon the application of IFRS 9. There were no financial assets or financial liabilities which CATIE has elected to designate as at FVTPL at the date of initial application of IFRS la IFRS 9.
- *Impact of the Initial Application of IFRS 9 in the Financial Performance* - The application of IFRS 9 has not had an impact in the cash flows of CATIE.

Impact of the Application of IFRS 15 Revenue from Contracts with Customers - In the current year, CATIE has applied IFRS 15 *Revenue from Contracts with Customers* (as amended in April 2016) which is effective for an annual period that begins on or after 1 January 2018. IFRS 15 introduced a 5-step approach to revenue recognition. Far more prescriptive guidance has been added in IFRS 15 to deal with specific scenarios.

Due to the nature of CATIE, the adoption of this standard did not generate any significant impact on the financial statements as of December 31, 2018.

- b. ***New and Revised IFRS in Issue but not Yet Effective*** - As of the date of issue of these financial statements, CATIE has not applied the following new and revised IFRS that have been issued but are not yet effective:

- I. **IFRS 16** - Leases
- II. **IFRS 17** - Insurance Contracts
- III. **Amendments to IFRS 9** - Prepayment Features with Negative Compensation.
- IV. **Amendments to IAS 28** - Long-term Interests in Associates and Joint Ventures
- V. **Annual Improvements to IFRS - 2015–2017 Cycle** - *Amendments to IFRS 3 Business Combinations, IFRS 11 Joint Arrangements, IAS 12 Income Taxes and IAS 23 Borrowing Costs*
- VI. **Amendments to IAS 19** - *Employee Plan Amendment, Curtailment or Settlement Benefits*
- VII. **IFRS 10 Consolidated Financial Statements and IAS 28 - (amendments)** - Sale or contribution of assets between an Investor and its Associate or Joint Venture.
- VIII. **IFRIC 23** - Uncertainty over Income Tax Treatments

CATIE's management does not expect that the adoption of the previously-mentioned standards listed above will have a material impact in the financial statements in future periods. The main changes are detailed as follows:

- I. **IFRS 16 Leases**

General Impact of Application of IFRS 16 Leases - IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements for both lessors and lessees. IFRS 16

will supersede the current lease guidance including IAS 17 Leases and the related Interpretations when it becomes effective for accounting periods beginning on or after 1 January 2019. The date of initial application of IFRS 16 for CATIE will be 1 January 2019.

In contrast to lessee accounting, IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17.

- *Impact of the New Definition of a Lease* - CATIE will make use of the practical expedient available on transition to IFRS 16 not to reassess whether a contract is or contains a lease. Accordingly, the definition of a lease in accordance with IAS 17 and IFRIC 4 will continue to apply to those leases entered or modified before 1 January 2019.

The change in definition of a lease mainly relates to the concept of control. IFRS 16 distinguishes between leases and service contracts on the basis of whether the use of an identified asset is controlled by the customer. Control is considered to exist if the customer has:

- The right to obtain substantially all of the economic benefits from the use of an identified asset; and
- The right to direct the use of that asset.

CATIE will apply the definition of a lease and related guidance set out in IFRS 16 to all lease contracts entered into or modified on or after 1 January 2019 (whether it is a lessor or a lessee in the lease contract). In preparation for the first-time application of IFRS 16, CATIE has carried out an implementation project. The project has shown that the new definition in IFRS 16 will not change significantly the scope of contracts that meet the definition of a lease for CATIE.

- *Impact on Lessee Accounting* -

Operating Leases - IFRS 16 will change how CATIE accounts for leases previously classified as operating leases under IAS 17, which were off-balance sheet.

On initial application of IFRS 16, for all leases (except as noted below), CATIE will:

- Recognize right-of-use assets and lease liabilities in the consolidated statement of financial position, initially measured at the present value of the future lease payment;
- Recognize depreciation of right-of-use assets and interest on lease liabilities in the consolidated statement of profit or loss;
- Separate the total amount of cash paid into a principal portion presented within financing activities and interest (presented within operating activities) in the consolidated cash flow statement.

Lease incentives (e.g. rent-free period) will be recognized as part of the measurement of the right-of-use assets and lease liabilities whereas under IAS 17 they resulted in the recognition of a lease liability incentive, amortized as a reduction of rental expenses on a straight-line basis.

Under IFRS 16, right-of-use assets will be tested for impairment in accordance with IAS 36 *Impairment of Assets*. This will replace the previous requirement to recognize a provision for onerous lease contracts.

For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as personal computers and office furniture), CATIE will opt to recognize a lease expense on a straight-line basis as permitted by IFRS 16.

Finance Leases - The main differences between IFRS 16 and IAS 17 with respect to assets formerly held under a finance lease is the measurement of the residual value guarantees provided by the lessee to the lessor. IFRS 16 requires that CATIE recognizes as part of its lease liability only the amount expected to be payable under a residual value guarantee, rather than the maximum amount guaranteed as required by IAS 17. On initial application CATIE will present equipment previously included in property, plant and equipment within the line item for right-of-use assets and the lease liability, previously presented within borrowing, will be presented in a separate line for lease liabilities.

Based on an analysis of CATIE's finance leases as at 31 December 2018 on the basis of the facts and circumstances that exist at that date, CATIE's administration assessed that the impact of this change will not have an impact on the amounts recognized in CATIE's consolidated financial statements.

- *Impact on Lessor Accounting* Under IFRS 16, a lessor continues to classify leases as either finance leases or operating leases and account for those two types of leases differently. However, IFRS 16 has changed and expanded the disclosures required, in particular regarding how a lessor manages the risks arising from its residual interest in leased assets.

CATIE's management does not anticipate that this change will have an impact on CATIE's financial statements because as of this date it does not assets as lessor.

- II. **IFRS 17 Insurance Contracts** - The new Standard establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts and supersedes IFRS 4 *Insurance Contracts*.

The Standard is effective for annual reporting periods beginning on or after 1 January 2021, with early application permitted. It is applied retrospectively unless impracticable, in which case the modified retrospective approach or the fair value approach is applied.

CATIE's management does not anticipate that this change will have an impact on CATIE's financial statements

- III. **Amendments to IFRS 9 Prepayment Features with Negative Compensation** - The amendments to IFRS 9 clarify that for the purpose of assessing whether a prepayment feature meets the Solely Payments of Principal and Interest (SPPI) condition, the party exercising the option may pay or receive reasonable compensation for the prepayment irrespective of the reason for prepayment. In other words, prepayment features with negative compensation do not automatically fail SPPI.

The amendment applies to annual periods beginning on or after 1 January 2019, with earlier application permitted. There are specific transition provisions depending on when the amendments are first applied, relative to the initial application of IFRS 9.

CATIE's management does not anticipate that this change will have an impact on CATIE's financial statements.

- IV. **Amendments to IAS 28 Long-term Interests in Associates and Joint Ventures** - The amendment clarifies that IFRS 9, including its impairment requirements, applies to long-term interests. Furthermore, in applying IFRS 9 to long-term interests, an entity does not take into account adjustments to their carrying amount required by IAS 28 (i.e., adjustments to the carrying amount of long-term interests arising from the allocation of losses of the investee or assessment of impairment in accordance with IAS 28).

The amendments apply retrospectively to annual reporting periods beginning on or after 1 January 2019. Earlier application is permitted. Specific transition provisions apply depending on whether the first-time application of the amendments coincides with that of IFRS 9.

CATIE's management does not anticipate that this change will have an impact on CATIE's financial statements.

- V. **Annual Improvements to IFRS Standards 2015-2017 Cycle Amendments to IFRS 3 Business Combinations, IFRS 11 Joint Arrangements, IAS 12 Income Taxes and IAS 23 Borrowing Costs**- The *Annual Improvements* include amendments to four standards.

- IAS 12 *Income Taxes* - The amendments clarify that an entity should recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized the transactions that generated the distributable profits. This is the case irrespective of whether different tax rates apply to distributed and undistributed profits.
- IAS 23 *Borrowing Costs* - The amendments clarify that if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, that borrowing becomes part of the funds that an entity borrows generally when calculating the capitalization rate on general borrowings.

- IFRS 3 *Business Combinations* - The amendments to IFRS 3 clarify that when an entity obtains control of a business that is a joint operation, the entity applies the requirements for a business combination achieved in stages, including remeasuring its previously held interest (PHI) in the joint operation at fair value. The PHI to be remeasured includes any unrecognized assets, liabilities and goodwill relating to the joint operation.
- IFRS 11 *Joint Arrangements* - The amendments to IFRS 11 clarify that when a party that participates in, but does not have joint control of, a joint operation that is a business obtains joint control of such a joint operation, the entity does not remeasure its previously held interest in the joint operation.

All the amendments are effective for annual periods beginning on or after 1 January 2019 and generally require prospective application. Earlier application is permitted.

CATIE's management does not anticipate that the application of the amendments in the future will have an impact on CATIE's financial statements.

- VI. **Amendments to IAS 19 Employee Benefits Plan Amendment, Curtailment or Settlement** - The amendments clarify that the past service cost (or of the gain or loss on settlement) is calculated by measuring the defined benefit liability (asset) using updated assumptions and comparing benefits offered and plan assets before and after the plan amendment (or curtailment or settlement) but ignoring the effect of the asset ceiling (that may arise when the defined benefit plan is in a surplus position). IAS 19 is now clear that the change in the effect of the asset ceiling that may result from the plan amendment (or curtailment or settlement) is determined in a second step and is recognized in the normal manner in other comprehensive income.

The amendments to IAS 19 must be applied to annual periods beginning on or after 1 January 2019, but they can be applied earlier if an entity elects to do so.

CATIE's management does not anticipate that the application of the amendments in the future will have an impact on the financial statements.

- VII. **IFRS 10 Consolidated Financial Statements and IAS 28 (amendments) Sale or Contribution of Assets between an Investor and its Associate or Joint Venture** - The amendments to IFRS 10 and IAS 28 deal with situations where there is a sale or contribution of assets between an investor and its associate or joint venture.

The effective date of the amendments has yet to be set by the IASB; however, earlier application of the amendments is permitted.

CATIE's management does not anticipate that this change will have an impact on CATIE's financial statements

VIII. **IFRIC 23 Uncertainty over Income Tax Treatments** - IFRIC 23 sets out how to determine the accounting tax position when there is uncertainty over income tax treatments. The Interpretation requires an entity to:

- determine whether uncertain tax positions are assessed separately or as a group; and
- assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings:
 - If yes, the entity should determine its accounting tax position consistently with the tax treatment used or planned to be used in its income tax filings.
 - If no, the entity should reflect the effect of uncertainty in determining its accounting tax position.

Interpretation is effective for annual periods beginning on or after 1 January 2019. Entities can apply the interpretation with either full retrospective application or modified retrospective application without restatement of comparatives retrospectively or prospectively.

CATIE's management does not anticipate that this change will have an impact on CATIE's financial statements.

16. DISBURSEMENTS SUBJECT TO APPROVAL

Some grant agreements entered into with international organizations, detailed in Exhibit 5 of the supplementary information, stipulate that disbursements for agreed-upon programs executed with grant funds are subject to approval or rejection by those organizations, depending on compliance with the terms of each agreement.

As of December 31, 2018 and 2017, CATIE's management is not aware of any amount of disbursements subject to reimbursement that have already been rejected by any donors.

17. CONTRACTUAL STATUS OF CATIE

On September 12, 2000, under Law No.8028, the Costa Rican Legislative Assembly ratified the articles of incorporation of CATIE entered into among the Government of Costa Rica, the Inter-American Institute for Cooperation on Agriculture (IICA) and CATIE. The most significant terms of this Law are as follows:

- a. The Inter-American Board of Agriculture will be the highest governing body of CATIE.
- b. CATIE's members may be regular or special. The regular members will be IICA, the Government of Costa Rica, and the Governments of the remaining member countries of IICA. Special members will include international governmental and non-governmental organizations, international centers, and private organizations with similar purposes as those of CATIE.

- c. IICA will contribute up to a maximum of 5% of IICA fees budget to CATIE's basic budget. The contribution made by IICA in 2017 and 2016 was US\$968,000 and US\$804,000. Each member country of CATIE will annually contribute with no less than US\$50,000 to cover CATIE's expenses.
- d. The agreement will be for a 20-year term as of the effective date and may be renewed for equal consecutive terms.

CATIE's equity consists of: i) the usufruct for the entire term of the articles of incorporation, for the equity consisting of lands, buildings, equipment, and other real and personal property contributed by IICA, plus improvements thereof, ii) all assets CATIE has acquired or will acquire in the future.

- e. Upon termination of the contract, all usufruct property as well as improvements thereof, will be returned to IICA. The remaining assets will be distributed between IICA, the Government of Costa Rica, and regular active members based on contributions made.

18. TAXES

Since CATIE is a not-for-profit international organization, it is exempted of any type of taxes, contributions, and national and municipal rates, whether present or future ones, as well as of any fees regarding customs, national licenses ("patentes"), and other.

19. RE-ISSUE OF THE FINANCIAL STATEMENTS

After issuing the independent auditors' report, dated March 20, 2018, CATIE's Management determined that the prior actuarial study assumed that the totality of CATIE's employees work for an indefinite term, when the correct information is that they work by a contract that has a defined term; thus, a new actuarial study was requested to the appraiser. Based on the new actuarial study, dated April 1, 2018, it was determined that the liabilities registered by CATIE as of December 31, 2017 are reasonable. We conducted our independent review of the new study and determined that the conclusions are reasonable.

20. APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements have been approved by CATIE's management, and their issue has been authorized for March 12, 2018.

* * * * *

**TROPICAL AGRICULTURE RESEARCH
AND TRAINING CENTER
(CATIE)**

AS OF DECEMBER 31, 2017

SUPPLEMENTAL FINANCIAL INFORMATION

EXHIBIT 1: Statement of fees of member countries and IICA.

EXHIBIT 2: Ageing analysis of pending fees from member countries and IICA.

EXHIBIT 3: Budget and execution of income by fund and source.

EXHIBIT 4: Budget and execution of expenses by fund and source.

EXHIBIT 5: Statement of financial position of agreement funds and funds in custody.

EXHIBIT 6: Execution of expenses by fund, division and expense purpose.

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

STATEMENT OF FEES OF MEMBER COUNTRIES AND IICA
YEAR ENDED DECEMBER 31, 2018

(Expressed in Thousands of U.S. Dollars)

	Fees Receivable at the Beginning of Year	Fees for the Year	Fees Collected During the Year			Fees Collected During the Year		
			Fees Collected During the Year	Fees Collected During the Year	Fees Collected During the Year	Fees Collected During the Year	Fees Collected During the Year	Fees Collected During the Year
Inter-American Institute for Cooperation on Agriculture (IICA)		US\$ 938		US\$ 938	US\$ 938			
Regular Members -								
Government of Bolivia	US\$ 670	50				US\$ 670	US\$ 50	US\$ 720
Government of Colombia	652		US\$ 191		191	461		461
Government of Costa Rica		50		50	50			
Government of Guatemala		50		50	50			
Government of Honduras	300	50	48		48	252	50	302
Government of Panamá		50		50	50	-		
Government of Nicaragua	28	50	14	36	50	14	14	28
Government of El Salvador	300	50	300		300		50	50
Government of República Dominicana	455	50	455	50	505			
Government of México	100	50				100	50	150
Government of Paraguay	700	50				700	50	750
Government of Belice	300	50				300	50	350
Government of Venezuela	400	50				400	50	450
Total	US\$3,905	US\$1,538	US\$1,008	US\$1,174	US\$2,182	US\$2,897	US\$364	US\$3,261

* * * * *

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

**AGEING ANALYSIS OF PENDING FEES FROM MEMBER COUNTRIES AND IICA
YEAR ENDED DECEMBER 31, 2018**

(Expressed in Thousands of U.S. Dollars)

	Años 1979- 2009	Año 2010	Año 2011	Año 2012	Año 2013	Año 2014	Año 2015	Año 2016	Año 2017	Año 2018	Total
IICA											
Government of Bolivia	US\$ 270	US\$ 50	US\$ 50	US\$ 50	US\$ 50	US\$ 50	US\$ 50	US\$ 50	US\$ 50	US\$ 50	US\$ 720
Government of Colombia	61	50	50	50	50	50	50	50	50	50	461
Government of Costa Rica	(57)	29	28								
Government of El Salvador	(300)			50	50	50	50	50	50	50	50
Government of Guatemala	(300)	50	50	50	50	50	50	50	50	50	302
Government of Honduras	(48)			50	50	50	50	50	50	50	
Government of Panamá											
Government of Nicaragua	(98)	14	14	14	14	14	14	14	14	14	28
Gobierno de República Dominicana	(400)	50	50	50	50	50	50	50	50		
Government of Belice				50	50	50	50	50	50	50	350
Government of Venezuela		50	50	50	50	50	50	50	50	50	450
Government of Paraguay	300	50	50	50	50	50	50	50	50	50	750
Government of México								50	50	50	150
Total	<u>US\$(572)</u>	<u>US\$343</u>	<u>US\$342</u>	<u>US\$464</u>	<u>US\$464</u>	<u>US\$464</u>	<u>US\$464</u>	<u>US\$464</u>	<u>US\$464</u>	<u>US\$364</u>	<u>US\$3,261</u>

* * * * *

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

BUDGET AND EXECUTION OF INCOME BY FUND AND SOURCE

YEAR ENDED DECEMBER 31, 2018

(Expressed in Thousands of U.S. Dollars)

Income Sources	Basic Fund		
	Budget	Execution	Balance
MEMBER FEES			
IICA	US\$1,000	US\$ 938	US\$ (62)
Member countries	<u>600</u>	<u>600</u>	<u> </u>
Sub-total	<u>1,600</u>	<u>1,538</u>	<u>(62)</u>
TRUSTS			
Fundatrópicos (COSUDE)	328	350	22
Fundatrópicos (USAID)	<u>263</u>	<u>270</u>	<u>6</u>
Sub-total	<u>592</u>	<u>620</u>	<u>28</u>
ADMINISTRATION & FINANCE			
DIVISION (DAF)			
Administration component	91	72	(19)
Treasury	25	17	(8)
Recovery of taxes	12	34	22
Work orders (maintenance)	5	10	6
Recovery of general services		(24)	(24)
Contribution of services	328	0	(328)
Overhead Funds in custody DAF	3	1	(2)
Other Income	<u> </u>	<u>88</u>	<u>88</u>
Sub-total	<u>463</u>	<u>199</u>	<u>(265)</u>
Commercial component			
Overhead for funds in custody commercial	7	9	2
Contributions of commercial farms	<u>173</u>	<u> </u>	<u>(173)</u>
Sub-total	<u>180</u>	<u>9</u>	<u>(171)</u>
Sub-total	<u>643</u>	<u>208</u>	<u>(435)</u>
Technical Programs			
Forestry, biodiversity, and climate change program (PBBByC)	187	248	60
Agriculture, livestock, and agro-forestry program (PRAGA)	220	201	(19)
Research Program Development Economics			
Environment	<u>128</u>	<u>236</u>	<u>108</u>
Sub-total	<u>535</u>	<u>684</u>	<u>149</u>
EDUCATION DIVISION			
Master's tuition	703	511	(192)
PhD's tuition	163	29	(133)
Overhead for professional master's degrees	43	142	99
Short course tuition	25	18	(7)
Exchange students	8	6	(2)
Biostatistics unit	67	45	(23)
Library	50	41	(9)

(Continues)

Income Sources	Basic Fund		
	Budget	Ejecución	Budget
Graduation fees			
Graduation tests	US\$ 10	US\$ 10	US\$ (1)
Sub-total	<u>1,068</u>	<u>803</u>	<u>(266)</u>
OUTREACH DIVISION			
- Recovery of indirect costs USAID	266	232	(33)
- Overhead national technical offices	<u>333</u>	<u>258</u>	<u>(75)</u>
Sub-total	<u>598</u>	<u>491</u>	<u>(107)</u>
TOTAL	<u>US\$5,036</u>	<u>US\$4,344</u>	<u>US\$(692)</u>

Commercial Fund			
ADMINISTRATION & FINANCE DIVISION (DAF)			
Administration component:			
Transportation	US\$ 280	US\$ 284	US\$ 4
Information technology	<u>290</u>	<u>249</u>	<u>(41)</u>
Sub-total	<u>570</u>	<u>533</u>	<u>(37)</u>
Commercial component:			
Seed orchard	55	52	(3)
Seed bank	340	270	(70)
Rooting of coffee stem cuttings	60	46	(14)
Lodging and hotel services	579	585	6
Laundry	25		
Souvenir store	70	69	(1)
Coffee plantation		27	27
Sugarcane plantation	379	433	54
Dairy farm	555	598	43
Livestock farm	130		(130)
Forest plantation	<u>5</u>	<u>44</u>	<u>39</u>
Sub-total	<u>2,198</u>	<u>2,149</u>	<u>(49)</u>
TOTAL	<u>US\$2,768</u>	<u>US\$2,682</u>	<u>US\$ 86</u>

Agreement Fund			
GREEN AND INCLUSIVE RESEARCH AND DEVELOPMENT DIVISION (DIDVI)			
Green and inclusive research and development division	US\$1,691	US\$ 1,375	US\$ (317)
Agriculture, livestock, and agro-forestry program (PRAGA)	1,945	2,599	653
Economic and environmental research and development program	<u>1,071</u>	<u>2,073</u>	<u>1,002</u>
Sub-total	<u>4,707</u>	<u>6,047</u>	<u>1,339</u>
OUTREACH DIVISION			
PRCC-UICN operations support	1,850	2,796	946
National Office Guatemala	1,013	926	(87)
National Office Honduras	137	96	(42)
National Office El Salvador			
National Office Nicaragua	420	1,493	1,073
National Office Panamá	1,335	1,034	(300)
National Office Dominicana		44	44
National Office Perú		9	9
National Office Belice	<u>120</u>	<u> </u>	<u>(120)</u>
Sub-total	<u>4,875</u>	<u>6,398</u>	<u>1,523</u>

(Continues)

	Agreement Fund		
MANAGED PROJECTS			
National Office Guatemala		<u>US\$ 113</u>	<u>US\$ 113</u>
Sub-total		<u>113</u>	<u>113</u>
TOTAL	<u>US\$9,582</u>	<u>US\$12,557</u>	<u>US\$2,975</u>
	Fund in Custody		
ADMINISTRATION & FINANCE			
DIVISION (DAF)			
Basic services	US\$ 5	US\$ 47	US\$ 42
Human development	3	0	(3)
Concessions	30	22	(8)
International fair	100	81	(19)
NRDC – Commercial Farm	1	26	25
DCO Investment Fund			
Sub-total	<u>139</u>	<u>176</u>	<u>37</u>
STRATEGIC SERVICES			
Specific Fund Managed		187	187
Communication and Advocacy unit	<u>200</u>	<u>71</u>	<u>(129)</u>
Sub-total	<u>200</u>	<u>258</u>	<u>58</u>
Technical programs			
Forestry, biodiversity, and climate change program (PBBYC)	485	1,002	517
Agriculture, livestock, and agro-forestry program (PRAGA)	495	1,095	600
Economic and environmental research and development program	<u>200</u>	<u>588</u>	<u>388</u>
Sub-total	<u>1,180</u>	<u>2,686</u>	<u>1,506</u>
EDUCATION DIVISION			
Scholarship funds	593	965	372
Scholarship funds and loans	90	88	(2)
Educational services	16	82	66
Master in sustainable tourism	100	101	1
Practical master in development	169	67	(102)
Online Education		56	56
Training unit	370	221	(149)
Orton Library			
Biostatistics unit	<u>80</u>	<u>100</u>	<u>20</u>
Sub-total	<u>1,418</u>	<u>1,678</u>	<u>260</u>
Outreach directorate and Revolving Fund			
National Office - México	30	0	(30)
National Office - Guatemala	105	142	37
National Office - Honduras	38	35	(4)
National Office - El Salvador	40	12	(28)
National Office - Nicaragua	10	39	29
National Office - Panamá	100	152	52
National Office - Rep. Dominicana			
National Office - Bolivia			
Sub-total	<u>323</u>	<u>379</u>	<u>56</u>
TOTAL	<u>3,260</u>	<u>5,176</u>	<u>1,916</u>
TOTAL BUDGET AND EXECUTION	<u>US\$20,647</u>	<u>US\$24,933</u>	<u>US\$4,286</u>

* * * * *

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)**BUDGET AND EXECUTION OF EXPENSES BY FUND AND SOURCE
YEAR ENDED DECEMBER 31, 2018**

(Expressed in Thousands of U.S. Dollars)

Sources of Expenses	Basic Fund		
	Budget	Execution	Balance
TOP GUIDELINES (DSU)			
General directorate	US\$ 361	US\$ 371	US\$ (10)
General sub-directorate	90	101	(11)
Board of Directors	65	66	(2)
High Council	18	17	1
Internal audit	<u>102</u>	<u>71</u>	<u>31</u>
Sub-total	<u>636</u>	<u>626</u>	<u>10</u>
ADMINISTRATION & FINANCE DIVISION (DAF)			
Administration component			
Administration and finance directorate			
Finance and accounting	422	264	158
External audit	36	41	(6)
Human development	181	178	3
General services and production	42	54	(11)
Surveillance services	220	229	(9)
Maintenance	224	232	(7)
Integrated waste management	12	8	4
Concierge services	<u>57</u>	<u>52</u>	<u>5</u>
Sub-total	<u>1,194</u>	<u>1,057</u>	<u>137</u>
Commercial component			
La Lola Farm	20	20	
Plant genetics collections	114	104	10
Biotechnology laboratory	<u>13</u>	<u>15</u>	<u>(2)</u>
Sub-total	<u>147</u>	<u>139</u>	<u>8</u>
Sub-total	<u>1,342</u>	<u>1,197</u>	<u>145</u>
STRATEGIC SERVICES			
Legal services	36	42	(6)
Communication and Advocacy unit	82	81	1
Development and outreach office	47	51	(4)
Strategic alliance office	<u>97</u>	<u>134</u>	<u>(37)</u>
Sub-total	<u>262</u>	<u>308</u>	<u>(46)</u>
GREEN AND INCLUSIVE RESEARCH AND DEVELOPMENT DIVISION (DIDVI)			
Green and inclusive research and development division	372	359	12
Forestry, biodiversity, and climate change program (PBBYC)	294	275	20

(Continues)

Sources of Expenses	Basic Fund		
	Budget	Execution	Balance
Agriculture, livestock, and agro-forestry program (PRAGA)	US\$ 260	US\$ 209	US\$ 52
Sub-total	<u>927</u>	<u>843</u>	<u>84</u>
EDUCATION DIVISION			
Education directorate	477	481	(4)
Fundatrópicos scholarships	125	130	(5)
Professors technical departments	386	389	(3)
Orton Library	50	99	(49)
Biostatistics unit	<u>97</u>	<u>88</u>	<u>(9)</u>
Sub-total	<u>1,135</u>	<u>1,187</u>	<u>(52)</u>
OUTREACH DIVISION			
Membership contributions	46	49	(3)
National Office - Belize	5	1	4
National Office - Mexico	17	15	2
National Office - Guatemala	21	21	
National Office - Honduras	78	77	2
National Office - El Salvador	16	15	0
National Office - Nicaragua	37	36	0
National Office - Dominican Rep.	44	42	2
National Office - Brazil	14	13	1
National Office - Colombia	31	30	1
National Office - Perú	17	31	(14)
National Office - Paraguay		10	(10)
National Office - USA	8	6	2
National Office - Ecuador	12	12	
National Office - Bolivia	<u>2</u>	<u>2</u>	
Sub-total	<u>346</u>	<u>360</u>	<u>(14)</u>
OTHER BUDGET ITEMS			
Impairment of accounts receivable	364	(583)	947
Reimbursement for vacation		(15)	15
Doubtful accounts		143	(143)
Colombia Payment Agreement		96	(96)
República Dominicana Payment Agreement		18	(18)
Operating Reserve	<u>25</u>		<u>25</u>
Sub-total	<u>389</u>	<u>(341)</u>	<u>730</u>
TOTAL	<u>US\$5,036</u>	<u>US\$4,179</u>	<u>US\$ 857</u>

Comercial

ADMINISTRATION & FINANCE DIVISION (DAF)			
Administration component:			
Information technology	US\$ 280	US\$ 246	US\$ 34
Transportation	<u>179</u>	<u>180</u>	<u>(1)</u>
Sub-total	<u>459</u>	<u>426</u>	<u>33</u>
Commercial component:			
Commercial Directorate			
Lodging and hotel services	364	331	33
Laundry	25	24	1
Coffee plantation	0	13	(13)
Sugarcane plantation	370	431	(61)
Forest plantation	38	32	7
Livestock farm	99	10	89

(Continues)

	Comercial		
General dairy industry	US\$ 440	US\$ 503	US\$(63)
Seed bank	300	316	(16)
Seed orchard	55	52	3
Rooting of coffee stem cuttings	50	41	9
Souvenir store	<u>66</u>	<u>64</u>	<u>2</u>
Sub-total	<u>1,808</u>	<u>1,818</u>	<u>(10)</u>
TOTAL	<u>US\$2,267</u>	<u>US\$2,244</u>	<u>US\$ 23</u>

	Agreement Fund		
GREEN AND INCLUSIVE RESEARCH AND DEVELOPMENT DIVISION (DIDVI)			
Forestry, biodiversity, and climate change program (PBBYC)	US\$1,562	US\$ 2,225	US\$ (662)
Agriculture, livestock, and agro-forestry program (PRAGA)	2,666	2,435	231
Economic and environmental research and development program (PIDEA)	<u>479</u>	<u>1,795</u>	<u>(1,316)</u>
Sub-total	<u>4,707</u>	<u>6,454</u>	<u>(1,747)</u>
OUTREACH DIVISION			
Regional climate change program	2,160	2,489	(329)
National Office Guatemala	2,562	1,328	1,234
National Office Honduras	12	220	(208)
National Office El Salvador			
National Office Nicaragua	58	682	(625)
National Office Panama	83	828	(746)
National Office Dominican Rep.		41	(841)
State of Bolivia			
Sub-total	<u>4,875</u>	<u>5,589</u>	<u>(714)</u>
MANAGED PROJECTS			
National Office Guatemala		<u>107</u>	<u>(107)</u>
Sub-total		<u>107</u>	<u>(107)</u>
TOTAL	<u>US\$9,582</u>	<u>US\$12,150</u>	<u>US\$(2,568)</u>

	Agreement Fund		
ADMINISTRATION & FINANCE DIVISION (DAF)			
Administration component:			
Basic services	US\$ 2	US\$ 38	US\$ (35)
Human development		0	
Infrastructure		0	
NRDC commercial farm	15	21	(6)
Concessions	5	11	(6)
International fair	<u>75</u>	<u>72</u>	<u>3</u>
Sub-total	<u>97</u>	<u>142</u>	<u>(45)</u>
STRATEGIC SERVICES			
Management of specific funds	139	154	(15)
Communication and Advocacy unit	<u>200</u>	<u>79</u>	<u>121</u>
Sub-total	<u>339</u>	<u>234</u>	<u>105</u>
GREEN AND INCLUSIVE RESEARCH AND DEVELOPMENT DIVISION (DIDVI)			
Green and inclusive research and development division (DIDVI)	473	867	(395)

(Continues)

	Funds in Custody		
Forestry, biodiversity, and climate change program (PBBByC)	US\$ 711	US\$ 867	US\$ (156)
Agriculture, livestock, and agro-forestry program (PRAGA)	405	611	(206)
Sub-total	1,589	2,346	(757)
EDUCATION DIVISION			
Scholarship funds	589	1,017	(428)
Scholarship funds and loans	28	59	31
Educational services	33	77	(45)
Master in agro-business	77	20	57
Master in sustainable tourism	26	93	(67)
Practical master in development	188	68	121
Online Education	6	52	(46)
Training unit	127	224	(97)
Orton Library		1	(1)
Biostatistics unit	105	181	(76)
Sub-total	1,180	1,792	(612)
External Projection Division			
National Office - Guatemala	27	134	(107)
National Office - Honduras	5	118	(113)
National Office - El Salvador	9	22	(14)
National Office - Nicaragua	15	9	6
National Office - Panamá		100	(100)
National Office - Rep. Dominicana			
National Office - State of Acre Brazil			
National Office - Bolivia			
Sub-total	55	383	(328)
TOTAL	3,260	4,896	(1,636)
TOTAL BUDGET AND EXECUTION	US\$20,146	US\$23,469	US\$(3,323)

* * * * *

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

SUMMARY OF INCOME AND EXPENSES IN AGREEMENT FUNDS
YEAR ENDED DECEMBER 31, 2018

(Expressed in Thousands of U.S. Dollars)

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Income	Expenses	Debtor	Creditor
2	001	005	DG60	1	Word Cocoa Fundation	Selection and generation of moniliasis-resistant cacao genotypes and maintenance and conservation of the internation cacao collection.	0	0	0	0	25	25	0	0
2	007	021	DI90	2	Banco Mundial	Strategic Support for the Development of the Atlantic Forest Corridor in Paraguay (P161498). Contract 7183347	0	4	0	0	25	29	0	0
2	008	005	DB25	3	Banco Centroamericano de Integración Económica	Prefactibilidad del Proyecto Sistema de Abastecimiento de Agua para la Cuenca Media del rio Tempisque y Comunidades Costeras (PAACUME)	12	0	0	0	112	101	0	0
2	010	002	DG56	4	Instituto Nacional Autonomo de Investigaciones Agropecuarias	INIAP Convenio Especifico de Cooperación Técnica	0	15	0	0	0	8	0	7
2	010	003	DH92	5	Instituto Nacional de Investigación Agropecuaria (INIA) de Uruguay	Convenio de Co-Ejecución del proyecto Intensificación Sostenible de la Lecheria Ref FTG/RF-15940-RG	0	0	0	0	18	16	0	2
2	011	008	DA50	6	The Center for International Forestry Research	Forest, Agroforestry Program (FTA)	0	0	0	0	0	0	0	0
2	011	009	DA51	7	The Center for International Forestry Research	CGIAR Research Program: Forest Trees and Agroforestry (FTA)	0	1	0	0	310	200	0	111
2	013	034	DH66	8	Banco Internacional de Desarrollo	Desarrollando sistemas de producción ganaderos competitivos con bajas emisiones de gases de efecto invernadero en América Central. Proyecto FONTAGRO FTG/RF-14652-RF	0	6	0	2	0	5	0	3
2	013	036	DE40	9	Banco Internacional de Desarrollo	Mecanismos y Redes de Transferencia de Tecnología Relacionada con el Cambio Climático en América Latina y el Caribe.No. ATN/FM-14836-RG	0	846	0	0	0	568	0	278
2	013	038	DH84	10	Banco Interamericano de Desarrollo	Innovaciones para fomentar la adaptación al Cambio Climático del Sistema Productivo Agrícola y Ganadero en América Latina y el Caribe	0	19	0	0	0	5	0	14
2	013	039	DH93	11	Banco Interamericano de Desarrollo	Plataforma Latinoamericana y del Caribe para la intensificación sostenible de la producción ganadera:	0	129	0	0	47	76	0	99
2	013	040	GQ03	12	Banco Interamericano de Desarrollo	Contrato con el Inter-American Development Bank (IDB)	0	0	0	0	9	0	0	9
2	014	003	DG28	13	Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement	Agreement between the Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement (CIRAD) and the Centro Agronomico Tropical de Investigación y Enseñanza (CATIE)	0	16	0	0	189	185	0	21
2	014	005	DE33	14	Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement	Enhancing Adaptation and Resilience to Drought in Dry Tropical Social-Ecological Systems (Investigación y Gestión de Colaboración)	18	0	0	0	16	0	3	0

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
2	014	006	DF33	15	Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement	CIRAD - Persyst Department	0	33	0	0	21	32	0	23
2	014	007	DC30	16	Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement	Forests and Ecological intensification of Agricultural Systems	0	7	0	0	5	10	0	2
2	016	004	DH62	17	Centro Internacional de Agricultura Tropical	CONVENIO CIAT - CATIE, Carne y lácteos competitivos a través de la intensificación sostenible y el acceso a mercados especializados en Nicaragua. C-069-14	0	2	0	0	0	0	0	2
2	016	006	DA48	18	Centro Internacional de Agricultura Tropical	Subcontrato de Socio CCAFS (Cambio Climático , Agricultura y Seguridad Alimentaria _Centro Internacional de Agricultura Tropical (CIAT) C-061-15	8	0	0	0	90	111	28	0
2	019	005	GG12	19	Agencia Suiza para el Desarrollo y la Cooperación	La Unidad de Asistencia Técnica al Proyecto Cosecha de Agua en Nicaragua	0	632	0	0	0	682	51	0
2	019	006	GG13	20	Agencia Suiza para el Desarrollo y la Cooperación	Promotion adoption of Moringa sp. As an alternative to improve poor farmer live in the Northern dry corridor of Nicaragua. 7F-08758.01	0	7	0	0	-7	0	0	0
2	019	007	GG14	21	Agencia Suiza para el Desarrollo y la Cooperación	Adaptación de la agricultura al cambio climático a través de la cosecha de agua (Cosecha de Agua)	0	0	0	0	1,500	0	0	1,500
2	024	014	GD30	22	Organización de las Naciones Unidas para la Alimentación y la Agricultura	Aumento de la Resiliencia Climática de Familias Rurales a través de la Restauración de Paisajes y de Tierras Degradadas en Guatemala	0	17	0	0	0	19	2	0
2	028	005	DG65	23	Fundecooperacion para el Desarrollo Sostenible	Cosecha de agua y uso más eficiente en sistemas protegidos y diversificados en la zona principal hortícola de CR: Fomento de experiencias piloto con productores agroecológicos del Norte de Cartago y otras zonas importantes para la GAM (CODIGO 060-14)	0	64	0	0	0	7	0	57
2	029	003	DG47	24	Centre for Agricultural Bioscience International	CABI-PLANTWISE	0	13	0	0	61	70	0	4
2	033	012	GE19	25	Agencia de Cooperación Alemana	Programa CLIFOR, PN 11.2163.1-004.00 028/15 /2016/83231879	22	0	0	25	96	220	122	0
2	041	001	DF03	26	Biodiversity International	BIOVERSITY INTERNATIONAL LOA 2013-04 (Convenio Administrativo BIOVERSITY/CATIE para el año 2013) (LoA 2014/10 Adendum	0	12	0	0	111	111	0	12
2	041	002	DF28	27	Biodiversity International	Integrating approaches for enhancing productivity and Fusarium wilt management in banana Gros Michel (LOA213/52)	0	0	0	0	0	0	0	0
2	041	003	DI70	28	Biodiversity International	Forestry to enhance livelihoods and sustain forests in Mesoamerica: How institutional arrangements and value chains affect benefits and resources (LOA:14/006)	0	0	0	0	0	0	0	0
2	041	004	DE32	29	Instituto Internacional de Recursos Filogenéticos	"Evaluación del estado de arte de los productos de información agroclimática en Centroamérica" LoA CCAFS 2014/87	0	0	0	0	0	0	0	0
2	041	006	DC25	30	Biodiversity International	Design and baseline of randomized control trials on crowdsourcing crop improvement in Prueba3 project LOA 2015/76 CATIE/IDEA	0	0	0	0	0	0	0	0

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
2	041	007	DA49	31	Bioversity International	Comparación sistemática de diferentes enfoque de evaluación participativa de variedades de cultivos anuales para la adaptación climática (LOA 2015/73 CATIE-MAP)	0	0	0	0	133	137	4	0
2	041	008	GD24	32	Bioversity International	Support in creating robust climate information systems on climate and food security in Guatemala	1	0	0	0	3	0	0	2
2	043	012	GI13	33	Programa de las Naciones Unidas para el Medio Ambiente	Acuerdo de financiación a pequeña escala SSFA/REDD-004/2016	0	37	0	0	-36	0	0	0
2	043	013	DE49	34	Programa de las Naciones Unidas para el Medio Ambiente	Acuerdo de financiación a pequeña escala SSFA/REDD-004/2016	2	0	0	0	0	1	3	0
2	043	015	GD29	35	Programa de las Naciones Unidas para el Desarrollo	Acuerdo de Subsidio de Microcapital entre el Asociado en la Implementación y la Institución Receptora para la entrega de fondos de Subsidio CATIE	0	59	0	0	89	141	0	6
2	043	017	GD32	36	Programa de las Naciones Unidas para el Desarrollo	Proyecto Asistencia Técnica a las Partes que Reúnen las Condiciones para la Elaboración del Sexto Informe Nacional del CDB (6NR-LACII) del Programa de las Naciones Unidas para el Desarrollo-PNUD	0	0	0	0	78	78	0	0
2	043	018	GI17	37	Oficina de las Naciones Unidas de Servicios para Proyectos	Memorando de acuerdo - Modelo Básico - Entre UNOPS y ONG Locales Basadas en la Comunidad y Organizaciones Basadas en la Comunidad Bajo el Programa de Pequeñas Donaciones (GEF)	0	0	0	0	25	0	0	25
2	044	016	GI15	38	Oficina de las Naciones Unidas de Servicios para Proyectos	Fortalecimiento de Capacidades de las Organizaciones Socias y Plan de Comunicaciones del programa de Pequeñas Donaciones (PPD) en Panamá PAN/SGP/OP4/RAF/CD/17/13	0	0	0	0	45	45	0	0
2	067	003	DF29	39	Institut de Recherche pour le Developpement	MACACC (Agreement N° AIRD-13-AGRO-0005-09)	6	0	0	0	0	2	8	0
2	082	010	GE15	40	Unión Europea	Capacidades locales fortalecidas para el Desarrollo Productivo en Foresteria Comunitaria y valoración de bienes y servicios forestales (DCI-ALA/2014/338-885)	5	0	0	0	0	0	5	0
2	082	011	GA28	41	Unión Europea	Gestion de Zonas Costeras - Convocatoria "WATERCLIMA LAC" DCI-ENV/2014/350-470	0	102	103	3	0	214	212	0
2	082	012	GD28	42	Unión Europea	Contrato de Subvención, Acciones Exteriores de la Unión Europea, FOOD/2017/386-542 Plataforma de Informacion nacional sobre Nutrición (PINN)	0	964	0	0	562	688	0	838
2	084	012	DG11	43	United States Department of Agriculture	Cacao Resistencia a Enfermedades "Genetic and Phenotypic Evaluation of Basic Germoplasm, Mapping Populations advanced Full Sib Famillest and Selected Clones of Theobroma Cacao"	0	0	0	0	0	0	0	0
2	084	016	DH72	44	Centro Internacional de Agricultura Tropical	Subcontrato de Socio CCAFS (Cambio Climático , Agricultura y Seguridad Alimentaria _Centro Internacional de Agricultura Tropical (CIAT) C-061-15	0	8	0	0	0	0	0	8
2	084	017	DG57	45	United States Department of Agriculture	"Evaluation of Improved Cacao (Theobroma cacao) Materials for Agronomic Performance, Reaction to Diseases and Uptake of Cadmium."	0	42	0	0	50	54	0	37
2	084	018	DH80	46	United States Department of Agriculture	Low Emissions Cattle Farming /USDA La Ganadería de Bajas Emisiones	0	90	90	0	0	0	0	0
2	084	019	DG61	47	United States Department of Agriculture	Development of Clones of Theobroma cacao With Resistance to Frosty Pod and Black Pod Using Genomics-assisted Breeding Methodology AGREEMENT 58-6038-6-009-F	0	11	0	0	74	63	0	22

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
2	085	006	GA15	48	United States Agency for International Development	USAID Regional Climate Change Program RCCP N° 596-12-000001	130	0	1	3	2,796	2,489	0	179
2	085	009	GA43	49	United States Agency for International Development	Climate-Smart territories as management approach for design, implementation, monitoring and evaluation of climate change projects in Peru	0	0	0	0	0	0	0	0
2	095	100	DG63	50	EARTHCORP de Costa Rica Foundation	Contrato de arrendamiento de instalaciones y terreno en finca La Lola y Cooperación técnica entre el CATIE y EARTHCORP de Costa Rica Foundation	5	0	0	0	31	21	0	4
2	104	004	DC15	51	University of Gothenburg	Gothenburg EFD FASE II	0	7	0	0	0	7	0	0
2	104	005	DC17	52	University of Gothenburg	EFD-COMMONS	0	0	0	0	97	47	0	50
2	104	009	DC28	53	University of Gothenburg	Environment for Development Initiative in Central America Work Plan 2017 EfD .EEU ref 17002, Sida No 61050043	0	57	0	0	764	666	0	155
2	104	010	DC32	54	University of Gothenburg	EfD Travel Management Services	0	11	0	0	0	0	0	11
2	104	011	DC33	55	University of Gothenburg	Effects of forest certification on bird biodiversity in Sweden	0	9	0	0	0	3	0	5
2	104	012	DH91	56	University of Gothenburg	Develop Sustainable Futures for Food Production in The Tropics, Using the CR dairy sector: Optimising environmental and economic outcomes	13	0	0	0	62	77	28	0
2	108	005	DE36	57	United Nations Environment Programme	Joint UNEP-UNIDO Programme to host and manage the climate Technology Centre and Network Ref., DTIE 14-EN039	0	0	0	0	0	0	0	0
2	108	006	DE38	58	United Nations Environment Programme	Joint UNEP-UNIDO Programme to host and Manage the Climate Technology Centre and Network (CTCN)	0	117	0	0	0	56	0	61
2	108	007	DH73	59	United Nations Environment Programme	Climate and Clean Air Coalition to Reduce Short Lived Climate Pollutants: achieving SLCP emissions reductions and co-benefits from improved manure management in the livestock sector	0	0	0	0	0	0	0	0
2	108	008	DH77	60	United Nations Environment Programme	Roadmap to Nationally Appropriate Mitigation Action in Livestock Sector of Honduras and Nicaragua UNEP - NCF4	14	0	0	0	23	0	0	9
2	108	009	DE41	61	United Nations Environment Programme	Joint UNEP-UNIDO Programme to host and manage the Climate Technology Centre and Network (CTCN) Reference number: DTIE15-EN0104	0	0	0	1	0	0	0	1
2	108	010	DB27	62	United Nations Environment Programme	UNEP_CTCN_Regional Forum for LAC_Uruguay_Ago2018	0	0	0	0	74	74	0	0
2	111	008	DA42	63	Royal Norwegian Embassy	Mesoamerican Agroenvironmental Programme (MAP Norway) Second Phase	7	0	0	7	0	0	0	0
2	112	001	DF10	64	La Red Regional de Investigación y Desarrollo del Plátano y Banano para América Latina y El Caribe	MUSALAC	0	19	0	0	0	0	0	19
2	118	002	DG66	65	Ministerio de Medio Ambiente y Recursos Naturales (Rep Dominicana)	Contrato de Servicios de Consultoría: evaluación del Contenido de Biomasa y Carbono en Cobertura No Bosque en República Dominicana-CON-SCC-05-2017	0	0	0	0	148	123	0	26
2	119	005	DH95	66	United States Fish and Wildlife Service	Conserving Neotropical Migrants by Managing Ecosystem Services on Coffee Farms (6749)	0	0	0	0	9	13	4	0
2	121	002	DI41	67	Ministerio de Relaciones Exteriores de Finlandia	Ministerio de Relaciones Exteriores de Finlandia	0	0	0	0	0	0	0	0
2	129	002	DG50	68	Nestle Ltd.	Mejoramiento genético de variedades de Cacao	0	0	0	0	36	22	0	14

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
2	159	003	GD26	69	Fundación para la Conservación en Guatemala	Cogestión Territorial para la Conservación y manejo sostenible del complejo volcánico Acatenango-Fuego	16	0	0	9	154	147	0	0
2	163	004	DC24	70	International Development Research Center	Using an Environmental Economics Perspective to Influence Policies in Latin America and the Caribbean / Centre File 107959-001 (LACEEP Fase IV)	0	170	0	0	-48	121	0	0
2	173	001	GN01	71	Estado de ACRE-BRAZIL	Estado de Acre	0	7	0	0	0	0	0	7
2	180	001	DF26	72	World Agroforestry Centre	ICRAF-CATIE	0	13	0	0	0	3	0	10
2	182	002	GI10	73	Fundación para la Conservación de los Recursos Naturales	Consultoría "Creación de un modelo integral de incentivos por servicios ambientales, que promueva la conservación y la restauración ambiental, y aumente los ingresos de los pequeños productores	0	1	0	0	0	0	0	1
2	182	003	GI16	74	Fundación para la Conservación de los Recursos Naturales	Contrato de servicios entre La Fundación para la Conservación de los Recursos Naturales (Natura) y CATIE	0	0	0	0	28	15	0	13
2	183	003	GI12	75	Fundación para la Conservación de los Recursos Naturales	Puesto en marcha del plan de negocios concertado para la comercialización de café en las subcuencas de Cirí y Trinidad.	0	6	0	0	0	0	0	6
2	186	001	DC19	76	Conservación Internacional	CI-Ecosystem-Based Adaptation	49	0	0	0	51	2	0	0
2	191	006	DI74	77	Costa Rica Por Siempre	Acuíferos de Pococi, Sistema Acuatico Caño Negro y Rio Naranjo Savegre	0	2	21	0	22	2	0	0
2	191	007	DI78	78	Costa Rica Por Siempre	Desarrollo de indicadores de integridad ecológica y sus respectivos protocolos de monitoreo a nivel local para los ámbitos terrestres y de aguas continentales en 32 áreas silvestres protegidas de Costa Rica	0	5	0	0	0	31	26	0
2	196	001	DI63	79	Korea Forest Research Institute	KFRI Colaboración Invest. Prog. BIOENERGIA	0	7	0	0	0	7	0	0
2	199	003	DI79	80	Canje Deuda Naturaleza EEUU	Acuerdo de Recepción de la Donación 038-2014-02-010203040506/CATIE-INBIO. Diseño de un sistema de monitoreo para el Fondo del Primer Canje de Deuda por Naturaleza EE.UU-CR. TC 528.94	17	0	1	0	18	0	0	0
2	199	004	DC29	81	Instituto Nacional de Biodiversidad	Fortalecimiento de la gestión comunitaria del agua en acueductos rurales de las áreas de influencia y conectividad de los Acuíferos de Guácimo-Pococi, Área Priorizada Tortuguero	1	0	0	0	40	48	9	0
2	200	002	DI89	82	Ministerio del Medio Ambiente y Recursos Naturales	CD/MARN/02/2016 "Consultoría apoyo técnico a la formulación de la ENA REDD-Mba El Salvador" Proyecto N°TF 099529	0	31	0	0	225	256	0	0
2	202	001	GG11	83	EPTISA Servicios de Ingeniería S.A.	Programa de fortalecimiento institucional a las políticas de desarrollo de Nicaragua (POFI)	0	2	2	0	0	0	0	0
2	206	001	DA46	84	The Center for International Forestry Research	Forest Trees and Agroforestry Program (FTA)	0	0	0	0	0	0	0	0
2	207	001	GA02	85	Quality Institut	Fortalecimiento de las capacidades nacionales para la implementación del Tratado Internacional sobre Recursos Fitogenéticos para la Alimentación y la Agricultura en Guatemala.	0	0	0	0	0	0	0	0
2	208	002	DG55	86	Texas A&M Agrilife Reserach	Revitalización del Sector Café en Centroamérica (Subrecipient Agreement N° 06-S140670)	0	1	0	0	16	16	0	0
2	210	001	GF25	87	Centro Nacional de Tecnología Agropecuaria y Forestal	Fortalecimiento de la Agricultura Familiar aplicando Tecnologías Sostenibles ante el Cambio Climático en El Salvador	68	0	0	0	0	0	68	0
2	216	002	GA49	88	Sistema Nacional de Áreas de Conservación del Ministerio de	Desarrollar un Plan de Gestión Integral del Recurso Hídrico, tomando como estudio de caso la cuenca del río	2	0	0	2	0	0	0	0

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
					Ambiente y Energía	Arenal, con el fin de lograr una gestión integral de la cuenca hidrográfica. Contrato por servicio de consultoría entre el CATIE y el SINAC, Numero								
2	216	003	DE42	89	Sistema Nacional de Áreas de Conservación del Ministerio de Ambiente y Energía	Consultoría para la Capacitación de Actores Locales interesados en brindar servicios no esenciales y el desarrollo de encadenamientos productivos en relación al turismo en las Áreas Silvestres Protegidas del Sistema Nacional de Áreas de Conservación	0	0	0	0	0	0	0	0
2	216	004	DE44	90	Sistema Nacional de Áreas de Conservación del Ministerio de Ambiente y Energía	Capacitación de Funcionarios Municipales en el Marco del Proyecto Fortalecimiento del Programa de Turismo en Áreas Silvestres Protegidas Ref PTS-145-SCC-CF-145	0	0	0	0	0	0	0	0
2	223	001	DG58	91	Rural Development Administration	Rural Development Administration (RDA) of The Republic of Korea	0	55	0	0	70	60	0	65
2	223	002	DG64	92	KoLFACI of the Rural Development Administration (RDA)	Enhancement of cacao production through the use of improved germplasm and selected climate smart agricultural practices	0	41	0	0	222	167	0	96
2	224	001	DI80	93	Agencia Luxemburguesa para la Cooperación al Desarrollo	Adenda 1. Acuerdo Marco de Cooperación técnica MAE/013-15 1006 firmado entre LuxDev y el CATIE	0	101	0	0	31	73	0	59
2	225	001	DE43	94	Ministerio de Ambiente de Haití	Programa de apoyo para el carbono No. GRT / FM-11803-HA y TSO / HR-13930- HA HA pourexcuter FMAM-BID Proyecto Macaya sobre la protección de la parte superior de la Cuenca del área Macaya Park, en lo sucesivo, "el Proyecto".	5	0	0	0	29	24	0	0
2	226	001	DI81	95	World Resources Institute	Supporting Initiative 20 by 20: A country-led effort to bring Restoring 20 million hectares of degraded lands in Latin America and the Carib-bean into restoration by 2020. Project number 15_III_072_Lateinamerika_A_Initiative 20 by 20	0	31	0	0	235	266	0	0
2	227	001	GI11	96	Ministerio de Relaciones Exteriores de Finlandia	Bosques y Manejo de Bosques en América Central /CATIE -MAP-FINNFOR	0	9	0	0	0	0	0	9
2	227	002	GE18	97	Secretaria de Energía Recursos Naturales, Ambiente y Minas	Nº 16_III_080_Central America_A_Developing secondary forest	21	0	0	0	0	0	21	0
2	227	003	DH90	98	Secretaria de Energía Recursos Naturales, Ambiente y Minas	Entregando multiples beneficios ambientales mediante el manejo sostenible de los paisajes productivos	0	3	0	0	49	75	23	0
2	227	004	GI14	99	Ministerio de Ambiente Panama	Una estrategia regional para la adaptación y mitigación del cambio climático	8	0	0	0	972	768	0	196
2	228	001	DB22	100	Citibank International Limited, Luxembourg Branch	Finance in Motion GmbH /Market Opportunities Studies and Environmental and Social Country Risk Assessments	2	0	0	2	0	0	0	0
2	229	001	DI82	101	Westfaelische Wihelms-Universitaet	Consortium Agreement for the project: "Green Transformations in the global South (GreeTS): opening the black-box of a pro-active state and management of sustainability trade-offs in Costa Rica and Vietnam"	13	0	0	0	117	83	0	22
2	231	001	DE45	102	Fundecooperacion para el Desarrollo Sostenible	Implementando lo aprendido: mejorando las capacidades de los pobladores de la Península de Nicoya para enfrentar los impactos del cambio climático en el recurso hídrico (Nº 051-14)	0	23	0	0	29	37	0	14
2	231	002	DE48	103	Fundecooperacion para el Desarrollo Sostenible	Propuesta técnico-financiera para el estudio de prácticas efectiva para adaptación de cultivos prioritarios para seguros en Costa Rica." CÓDIGO (116-14).	2	0	0	0	37	35	0	0
2	232	001	DG59	104	World Coffee Research	World Coffee Research 16203	2	0	0	0	2	0	0	0

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
2	233	002	DG62	105	Instituto Interamericano de Cooperación para la Agricultura	Contrato de Subdelegación para la ejecución de las acciones regionales de investigación y extensión agrícola en el marco del Programa de Gestion Integral de la Roya del Cafe	0	40	0	0	187	215	0	13
2	233	003	DC36	106	Instituto Interamericano de Cooperación para la Agricultura	Gestion de conocimientos para la adpatacion de la agricultura familiar al cambio climatico (INNOVA-AF)	0	0	0	0	12	12	0	0
2	234	001	DC27	107	Global Green Growth Institute	GGGI_Consulting Services_LPH-2016-0130	5	0	0	5	0	0	0	0
2	237	001	GJ03	108	Ministerio de Educación Superior Ciencia y Tecnología	Alternativas tecnológicas financieras para la renovación , rehabilitación y fomento de cafetales en la Republica Dominicana	1	0	0	0	44	41	0	2
2	243	001	DH83	109	Korea Rural Economic Institute	Integrated Silvopastoral Apprpaches for Ecosystem Management	0	2	0	0	0	0	0	2
2	244	001	DI84	110	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety	Development of sustainable forestry models & links to private finance for secondary forests.	0	8	0	0	494	531	28	0
2	244	002	DH85	111	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety	International Climate Initiative (IKI)Scaling up Biodiversity Conservation through Climatesmart Agrosilvopastoral Practices in Landscapes dominated by Cattle-raising Systems in Three Regions of Mexico	12	0	0	0	576	470	0	95
2	244	003	DG68	112	International Center for Research in Agroforestry	Harnessing the potential of trees on farms for meeting national and global biodiversity targets. Subgrant Agreement between ICRAF and CATIE/TC 06/06/18: 1.1662	0	0	0	0	19	61	42	0
2	246	001	DB24	113	Dirección Ejecutiva del proyecto Integración y Desarrollo de Mesoamerica	UDA/PIDM/Cadena de Valor Cacao Fino de Aroma	0	23	0	0	0	23	0	0
2	247	001	DC31	114	Empresa Nicaragüense de Electricidad	Asistencia Técnica para el fortalecimiento de la Unidad Técnica y del Proyecto y la Supervisión para la puesta en marcha del Mecanismo de compensación por Servicios Ambientales (MCSA) Contrato 13-2017 IDEA/ENEL/NIC_Asistencia Técnica	0	0	0	0	0	0	0	0
2	248	001	DE50	115	Centro Tecnológico Forestal de Cataluña	Models and decision Support tools for integrated Forest policy development under global change and associated Risk and Uncertainty	0	15	0	0	47	40	0	22
2	249	001	DI91	116	Oxfam Intermon	Reducción sostenible de la Inseguridad Alimentaria en los municipios del Alto Artibonite	0	163	2	0	0	185	23	0
2	250	001	DC34	117	Johns Hopkins University (Maryland)	EGAP_JHU_Monitoring Experiment - Community monitoring to facilitate climate change adaptation by local institutions in water-scarce regions of Central America	1	0	0	0	164	113	0	50
2	251	001	DC35	118	National Environment & Planning Agency	Design of Payment for Ecosystem Services Scheme in Yallahs and Hope River Watershed Management Units in Jamaica	0	0	0	0	654	419	0	235
2	252	001	GD31	119	Proatec SRL	Servicios de Consultoría para el apoyo de la implementación del Proyecto Adaptación al Cambio Climático en el Corredor Seco de Guatemala No. 2009 67 075	0	0	0	0	40	41	1	0
2	253	001	DB26	120	Instituto Mixto de Ayuda Social	IMAS_Capacitación indígena emprendimientos productivos sostenibles	0	0	0	0	148	149	1	0

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
2	254	001	DH96	121	Belize Livestock Producer Association	Developing a Climate-Smart and Green Cattle Sector in Belize through Technology Innovations and Strengthening Local Institutions	0	0	0	0	19	3	0	16
2	255	001	DI92	122	The National Institute for Forest Science	Develop future landscape and ecosystem-level scenarios for forest and landscape restoration under high exposure to climate change (0	0	0	0	51	2	0	49
Total Agreements funds 2							468	4,116	220	60	12,444	12,043	712	4,601

Fund	Source	Agreement	Cost		Name of Donor	Name of Project	Balances as of December 31, 2017		Adjustments to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
							Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Credits
3	024	009	GD21	123	Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO)	FAO - Fortalecimiento Institucional		9,42	0,00	0,00	110,28	100,77	0,00	18,93
3	097	039	GD13	124	Comisión Nacional de Áreas Protegidas	CONAP / Holanda		1,75	0,00	0,00	0,01	0,09	0,00	1,67
3	097	058	GD16	125	Ministerio de Agricultura y Ganadería (MAGA)	MAGA CONVENIO 89-2007		<u>109,61</u>	<u>0,00</u>	<u>0,00</u>	<u>2,48</u>	<u>5,75</u>	<u>0,00</u>	<u>106,34</u>
Total Funds in Administration							<u>0,00</u>	<u>120,78</u>	<u>0,00</u>	<u>0,00</u>	<u>112,77</u>	<u>106,62</u>	<u>0,00</u>	<u>126,93</u>

* * * * *

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

SUMMARY OF INCOME AND EXPENSES IN FUNDS IN CUSTODY AND MANAGED PROJECTS
YEAR ENDED DECEMBER 31, 2018

(Expressed in Thousands of U.S. Dollars)

Fund	Source	Agreement	Cost center		Name of Cost Center	Balances as of December 31, 2017		Adjustment to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
						Debtor	Creditor	Debits	Credits	Income	Expenses	Debtor	Creditor
8	085	010	EB59	1	USAID - Becas PRCC	0	13	0	0	183	126	0	70
8	092	005	DH01	2	Ganadería y Manejo del Medio Ambiente	0	123	1	0	328	304	0	145
8	092	025	DE01	3	Cambio Climático y Cuencas	0	58	26	0	318	300	0	50
8	092	026	DC11	4	Investigación en Desarrollo Economía y Ambiente	0	102	36	31	350	289	0	158
8	092	029	BE11	5	Concesiones	0	9	0	0	22	11	0	19
8	092	030	DA05	6	Laboratorio de Suelos	0	31	0	0	18	10	0	39
8	092	035	GI02	7	OTN Panama	0	4	0	0	152	100	0	56
8	092	040	GM02	8	OTN Bolivia	18	0	0	0	0	0	18	0
8	092	046	BD02	9	Salud Ocupacional	0	0	0	0	0	0	0	1
8	092	047	BE15	10	Feria Internacional del CATIE	4	0	0	0	81	72	0	4
8	093	004	EC01	11	Unidad de Capacitacion	0	29	0	0	221	224	0	26
8	093	006	EB29	12	Textos y Materiales	1	0	0	0	70	67	0	2
8	093	007	EB32	13	Vida Estudiantil	0	0	0	0	12	10	0	3
8	093	014	EB37	14	Becas DAAD	0	15	0	0	155	176	6	0
8	093	028	EB03	15	Becas - MAG/Costa Rica	0	0	0	0	0	0	0	0
8	094	002	GF01	16	OTN El Salvador	0	8	2	0	12	22	4	0
8	094	042	DA15	17	Dirección de Investigación y Desarrollo	0	20	0	0	18	16	0	22
8	094	046	GG01	18	OTN - Nicaragua	34	0	0	0	39	9	3	0
8	094	054	DD10	19	Grupo Manejo de Cuencas Hidrográficas	25	0	0	0	87	54	0	8
8	094	061	DB01	20	Unidad de Desarrollo de Agronegocios	0	41	2	0	171	132	0	77
8	094	064	DI23	21	Revista de Recursos Naturales y Ambiente	0	3	0	0	0	0	0	3
8	094	070	DG33	22	Cacaocultura Latinoamericana	0	14	0	0	265	199	0	80
8	094	084	DG36	23	Grupo Café, Rentabilidad y Diversidad	0	1	0	0	74	52	0	22
8	094	092	DG38	24	Cacao Comercial	0	30	0	0	152	133	0	49
8	094	101	FI06	25	NRDC Finca Comercial	0	34	0	0	26	21	0	39
8	095	022	BB08	26	Servicios Basicos CATIE	0	2	0	0	47	38	0	11
8	095	033	GD02	27	Adm. Proyectos Guatemala	11	0	9	0	142	134	10	0
8	095	063	FH01	28	Jardín Botánico CATIE	0	12	0	0	58	62	0	9
8	095	067	DA16	29	Asesoramiento Agroforestal	2	0	0	0	0	0	2	0
8	095	073	DG34	30	Publicaciones y Consultorías Nicaragua	0	1	0	0	2	0	0	3
8	095	075	GE02	31	OTN - Honduras	0	12	22	3	35	118	91	0
8	095	079	ED02	32	Biblioteca Conmemorativa ORTON	0	1	3	3	0	1	0	0
8	095	082	DG35	33	Ensayo de Café - Bonilla II	0	5	0	0	20	24	0	1
8	095	086	CB01	34	Oficina de Comunicación e Incidencia	0	15	0	0	71	79	0	7
8	095	096	EB22	35	Generación de Fondos Isabel Gutierrez	0	0	0	0	0	0	0	0
8	095	097	GA04	36	Apoyo Direccion Proyeccion Regional	2	0	0	0	0	2	3	0
8	095	101	CA03	37	Gestion de Fondos Específicos OAE	0	0	0	0	75	61	0	15
8	096	001	EB08	38	Becas - CONACYT	0	23	0	0	120	108	0	35
8	096	003	EB34	39	Becas OEA	0	1	0	0	15	16	0	0
8	096	018	EB58	40	Educación Virtual	0	2	0	0	56	52	0	6
8	096	028	EE01	41	Unidad Bioestadística	0	74	0	0	100	181	7	0
8	096	032	EB48	42	Becas IGERT	0	17	1	0	-4	12	0	0
8	096	034	EB19	43	Fondo Estudiantil para Emergencias Medicas	0	14	0	0	0	1	0	13

(Continues)

Fund	Source	Agreement	Cost center		Name of Cost Center	Balances as of December 31, 2017		Adjustment to Previous Periods		Movements of the Year		Balances as of December 31, 2018	
						Debtor	Creditor	Debits	Credits	Debtor	Creditor	Debits	Acredor
8	096	036	EB16	44	Estudiantes de Intercambio	0	0	0	0	1	0	0	1
8	096	039	EB17	45	Fondo Educativo	0	44	0	0	76	55	0	65
8	096	044	EB14	46	Becas por Donación	0	0	0	0	330	372	42	0
8	096	045	EB02	47	Becas - Cooperación Belga	0	0	0	0	0	0	0	0
8	096	047	EB49	48	Becas BID	12	0	0	12	13	13	0	0
8	096	049	EB10	49	Becas Estudiantes	18	0	0	0	154	152	16	0
8	096	050	EB04	50	Becas - SENACYT / FUNDACYT	0	14	0	0	11	25	0	0
8	096	053	EB24	51	Maestria en Agronegocios CATIE-INCAE	0	21	0	0	-2	20	0	0
8	096	054	EB54	52	IICA - Legado Académico H. Wallace	0	75	12	0	90	106	0	46
8	136	001	FI10	53	Fondo de Inversion DCO	0	13	0	0	9	0	0	22
8	150	001	FI12	54	BIOTECH Operativo	357	0	0	0	311	61	107	0
8	151	001	FI13	55	Híbridos Comerciales	253	0	0	0	253	0	0	0
8	154	001	GB03	56	Oficina Técnica Nacional - Belice	0	1	0	0	0	0	0	1
8	155	001	GC03	57	Generación de Fondos OTN Mexico	0	6	0	0	0	0	0	6
8	156	001	GA14	58	Unidad de Gestion de Oportunidades UGO	0	44	0	0	111	92	0	63
8	162	001	DF24	59	Catedra Agroecologia y Agrobiodiversidad	0	0	0	0	0	0	0	0
8	165	001	FI15	60	Colecciones Fitogeneticas	0	10	0	0	55	31	0	34
8	166	001	EB43	61	Beca Doctorado M Podovan	1	0	0	1	0	0	0	0
8	169	001	EB45	62	Beca Doctorado M Podovan	0	1	0	0	-1	0	0	0
8	171	001	EB47	63	Mestria Practica para el Desarrollo	0	0	0	0	68	68	0	0
8	174	001	GJ02	64	OTN-Republica Dominicana	0	1	0	0	0	0	0	1
8	177	001	FI16	65	Dirección Comercial	73	0	0	73	0	0	0	0
8	179	001	AA03	66	Generación de Fondos Alvaro Umaña	0	5	0	0	61	60	0	6
8	183	002	DA41	67	MFA - Noruega MAP Territorio Clave Trifinio	0	155	7	0	6	104	0	50
8	189	001	GN02	68	OTN Acre Brazil	0	0	0	0	0	0	0	0
8	195	001	DE23	69	Catedra Decisiones Ambientales	32	0	0	0	31	6	6	0
8	197	001	EB51	70	Becas - OSF	0	0	0	0	0	5	5	0
8	201	001	EB52	71	Capital Semilla Fondo Educativo	4	0	0	0	12	4	0	4
8	221	001	DI76	72	Conferencia WALLACE	0	26	0	0	0	0	0	26
8	242	001	DI16	73	Curso Manejo Diversificado de Bosques	0	349	220	268	566	508	0	455
Total Custody						845	1,480	342	391	5,645	4,896	321	1,754

* * * * *

TROPICAL AGRICULTURE RESEARCH AND TRAINING CENTER (CATIE)

EXECUTION OF EXPENSES BY FUND, DIVISION AND EXPENSE PURPOSE

YEAR ENDED DECEMBER 31, 2018

(Expressed in Thousands of U.S. Dollars)

	Staff	Travel and Per Diem	Communication and Printing	Maintenance of Equipment and Buildings	General Expenses	Training and Scholarships	Investment in Equipment and Infrastructure	Consumables and Specific Costs	Institutional Support and Overhead	Total
Basic Activity Fund;										
Top Guidelines	US\$ 454	US\$ 129	US\$ 13		US\$ 28					US\$ 624
Administrative and Finance Division										
Administration component	929	9	26	US\$ 32	50	US\$ 1		US\$ 10		1,057
Comercial component	120		4	1	11			4		140
Strategic Services	263	5	12	6	17	1		4		308
Green and Inclusive Research and Development Directorate	745	13	26	6	50	1		2		843
Education Division	857	20	61	6	100	141		2		1,187
Outreach Division	255	27	6		51	92		19	US\$ 24	474
Other Budget ítems	(14)									(14)
Sub-total Basic Activities	3,610	203	148	51	307	236		41	24	4,619
Commercial Activity Fund:										
Administrative and Finance Division										
Service component	433	14	28	168	120			30		793
Commercial component	547	6	37	86	77			699		1,452
Sub-total Commercial Activities	980	20	65	254	197			729		2,245
Agreement Funds:										
Green and Inclusive Research and Development Directorate	3,643	638	107	28	569	803	US\$ 74	40	551	6,453
Outreach Division	3,033	347	225	65	311	678	255	113	563	5,590
Managed Funds	76				7	19		1	4	107
Total Agreements	6,752	985	332	93	887	1,500	329	154	1,118	12,150
Funds under Custody:										
Administrative and Finance Division										
Administration component	8	3	1	2	35		3	87	3	142
Comercial component	81	3	5	11	18	4	4	20	8	154
Strategic Services	78				1	60				141
Green and Inclusive Research and Development Directorate	1,515	125	56	16	59	223	30	22	147	2,193
Education Division	359	43	18	6	26	1,270	19	20	29	1,790
Outreach Division	241	23	19	24	102	55	1		11	476
Total Funds in Custody	2,282	197	99	59	243	1,612	57	149	198	4,896
TOTAL	US\$13,623	US\$1,405	US\$644	US\$457	US\$1,634	US\$3,348	US\$386	US\$1,073	US\$1,340	US\$23,910

* * * * *



Financial Report To December 31, 2018

56th Regular Meeting of the Board of Directors

March 12 to 14, 2019 – Turrialba, Costa Rica

Content

Presentation.....	3
I. Executive Summary	4
II. Budget and Income and Expenditure Executio.....	5
III. Status of Activities.....	8
IV. Status of member country quotas	10
V. Status of pre-financing agreements and custody funds	11

Presentation

March 13, 2019

Sirs
Executive and Finance Committee
Board of Directors

Tropical Agricultural Research and Higher Education Center (CATIE)

Dear Sirs:

In accordance with the provisions of Section c of Article 91 of the CATIE General Regulations, the financial report as of December 31, 2018 is submitted.

The cumulative results contained in this report have been submitted and reviewed with the Director General of CATIE and also discussed with the Executive Committee composed of the Director and Deputy Director General, Divisional Directors, as well as with Program Leaders and the Internal Audit Office, among others. We hope that the results shown in the following tables and the synthesized analysis will facilitate their understanding and allow the Executive and Finance Committee of the Board of Directors to provide the necessary follow-up and recommendations to readjust CATIE's current and future budget and financial horizon.

Sincerely,
Francisco Jamienson Fonseca
Director of Administration and Finance, a. i.

C.c.: Muhammad Ibrahim, Director General
Walter Solis, Internal Auditor

I. Executive Summary

Dear members of the Executive and Finance Committee of the Board of Directors of CATIE

What is proposed below for discussion and analysis is a summary of the financial situation of the activities of the Tropical Agricultural Research and Higher Education Center (CATIE) with a cutoff date of December 31, 2018.

CATIE's income and expenditure budget consists of Core, Commercial, Agreements and Custody funds. The segregation of the budget by funds originated due to the nature of the activities carried out, the origin of the resources that finance them, and by any existing restrictions on each one. Each fund is an independent financial unit with its own assets, liabilities, net assets, income and expenditures.

The Center's Financial Statements identify the restricted or unrestricted nature of the funds controlled in the following categories:

Core Activities Fund: these are classified as non-restricted funds, constituted by the resources coming from the IICA contributions and CATIE member country quotas, income originated in the teaching activities, surpluses coming from services activities and commercial farms, sums received for indirect cost recovery (ICR) and project Overhead (OH), donations and specific contributions from different agencies and governments, as well as administrative management, treasury management and trust fund yields.

Services Activities and Commercial Farm Fund: cataloged as non-restricted funds, these include the activities that take place in sugarcane, coffee farms, breeding and fattening of beef cattle, dairy operations, forestry and sale of forest seeds. They also include institutional services such as lodging, hotel, transportation, laundry and the sale of souvenirs, among others.

Agreements Fund: its use is strictly restricted to the activities that the agreement financing entity has previously indicated. These resources are not owned by CATIE. The Center is responsible for the execution of the resources according to the terms and regulations established in the respective agreement, contract or letter of understanding.

Plant Fund: consists of fixed assets owned by the Center, (land, buildings, machinery, equipment, vehicles, biological assets, intangible assets, etc.), as well as those assets that have been donated to the institution. They have no restrictions and are a necessary part of the resources available through CATIE to achieve institutional goals.

Funds in Custody: are created for the control of income and expenditures at the divisional level, the product of small donations and projects with specific purposes to be developed in a short term. Small consultancies and/or projects for amounts less than US\$ 75,000, educational scholarships for scientific and professional masters, scholarships for training courses and technical communication services, among others, are also part of the income for this fund.

II. Budget and Income and Expenditure Execution

Table 1

2018 Income Budget (in USD x 1000)				
Fund / Division / Program	Budget	Completed	Budget Balance	Percent Variation
CORE ACTIVITIES FUND	5 037	4 784	-253	95%
IICA Contribution	1 000	938	-62	94%
Partner quotas	600	600	0	100%
Fundatropicos Trust	592	620	28	105%
Administration and Finance - Services	463	566	103	122%
Administration and Finance - Commercial	180	81	-99	45%
Technical Programs (PIDEA, PBBByCC, PRAGA)	535	684	149	128%
Education	1 068	803	-265	75%
Outreach	598	492	-106	82%
COMMERCIAL ACTIVITIES FUND	2 768	2 682	86	97%
Administration and Finance - Services	1 244	1 212	32	97%
Administration and Finance - Commercial	1 524	1 470	54	96%
AGREEMENTS FUND	9 582	12 445	-2 863	130%
Technical Programs (PIDEA, PBBByCC, PRAGA)	4 707	6 047	-1 340	128%
Outreach	4 875	6 398	-1 523	131%
CUSTODY FUND	3 260	5 176	-1 916	159%
Administration and Finance - Services	138	176	-38	128%
Administration and Finance - Commercial	1	0	1	0%
Strategic Services	200	258	-58	129%
Technical Programs (PIDEA, PBBByCC, PRAGA)	1 180	2 685	-1 505	228%
Education	1 418	1 678	-260	118%
Outreach	323	379	-56	117%
TOTAL BUDGET	20 648	25 087	-4 945	122%

Relevant points related to Table 1:

The core fund shows an income compliance of 95%, which highlights a greater contribution from the technical programs of US\$150,000 due to the good execution of projects that provide overhead; the service activities also managed to make the expected contribution.

Income in the core fund for the education area had a deficit of 25%, because the funds projected for student scholarships were not acquired; in addition, some economic and political conditions in the Central American region in some way affected project execution, causing an 18% decrease in the estimated revenues.

In commercial fund activities, the implementation of an area for organic cane was maintained, which had high productivity in its first harvest year. On the other hand, the last commercial coffee harvest was made in 2018. Given the high labor costs and international coffee prices, these crop areas have been diversified with fast-growing forest plantations such as melina (*Gmelina arborea*) and pine (*Pinus caribaea*).

The Forest Seed Bank (FSB) had decreased income from seed sales this year and did not reach its contribution goal. It is expected that for the next period, market conditions improve and seeds in the inventory can be placed. It is necessary to mention that Accommodation and Transport services activities have maintained their projected income levels.

The agreement funds managed to increase disbursements, thanks to the greater implementation of projects such as the International Climate Protection Initiative (IKI) in Costa Rica and Mexico, and the start of a second phase of COSUDE-Water Harvest in Nicaragua and the consolidation of the Nutrition Information Platform (NIP) in Guatemala, financed by the European Union.

The funds in custody continue to be key in the financing of the technical personnel of the programs, since it gives support while waiting for consultancy payments to be received.

Table 2

2018 Expenditure Budget, (in USD x 1000)				
Fund / Division / Program	Budget	Execution	Budget Balance	Percent Variation
CORE ACTIVITIES FUND	5 037	4 647	390	92%
Higher Directives	636	626	10	98%
Administration and Finance - Services	1 194	1 057	137	89%
Administration and Finance - Commercial	148	139	9	94%
Strategic Services	262	308	-46	118%
Technical Programs (PIDEA, PByCC, PRAGA)	927	842	85	91%
Education	1 135	1 187	-52	105%
Outreach	346	360	-14	104%
Other categories	389	128	261	33%
Deterioration Country Quotas	364	-115	479	-32%
Country Payment Agreement	0	114	-114	0%
Adjustment (Uncollectible +FT)	0	143	-143	0%
Other Adjustments	0	-14	14	0%
Reserve Fund/Operations	25	0	25	0%
COMMERCIAL ACTIVITIES FUND	2 769	2 244	525	81%
Administration and Finance - Services	915	846	69	92%
Administration and Finance - Commercial	1 353	1 398	-45	103%
Surplus Services Activities	328	0	328	0%
Surplus Commercial Activities	173	0	173	0%
AGREEMENTS FUND	9 582	12 043	-2 461	126%
Technical Programs (PIDEA, PByCC, PRAGA)	4 707	6 454	-1 747	137%
Outreach	4 875	5 589	-714	115%
CUSTODY FUND	3 260	4 897	-1 637	150%
Administration and Finance - Services	138	142	-4	103%
Administration and Finance - Commercial	1	0	1	0%
Strategic Services	200	234	-34	117%
Technical Programs (PIDEA, PByCC, PRAGA)	1 180	2 346	-1 166	199%
Education	1 418	1 792	-374	126%
Outreach	323	383	-60	119%
BUDGET TOTAL	20 648	23 831	-3 183	115%

The execution of the core fund expenditure budget reached 92% and the most significant variations occurred in the category of non-ordinary items resulting from the application of new Financial Information Reporting Standards (NIIF).

The Directorate General of Catie, following the recommendations of the Board of Directors and the External Evaluation, has strengthened the Office of Strategic Partnerships with the appointment of Dr. Roberto Quiros. This office currently plays an important role in monitoring the different actions for resource mobilization.

In 2018, the new NIIF 9 standard (Financial Instruments) was applied, which resulted in a greater deterioration of country quotas pending collection. In this context, CATIE absorbed an amount of US\$678,000 and despite the financial impact in our statements, positive closure was obtained.

III Status of Activities Table 3

INTEGRATED RESULTS STATEMENTS For the period December 31, 2018 (Expressed in thousands of USDollars)	Regular Non-restricted Funds			Temporarily Restricted Funds		
	Activities	Activities				
	Core	Commercial	Sub-total	Agreements	Custody	Total
Total income:	4 345	2 682	7 027	12 150	4 896	17 046
Total expenditure:	4 620	2 244	6 864	12 150	4 896	17 046
(Deficit) primary surplus	-275	438	163	0	0	163
Transfer from productive activities fund	438	-438				0
Increase (reduction) in non-restricted net assets	163	0	163	0	0	163
Other non-current income						
Donation, sale of assets	138		138			138
Reasonable value of biological assets	133		133			133
Value Certificate for Milk Contribution	173		173			173
Total non-current income:	444	0	444	0	0	444
Other non-current income:						
Depreciation costs	541		541			541
Losses due to Asset disposal	14		14			14
Deterioration in other accounts receivable	143		143			143
Deterioration in country accounts receivable	-115		-115			-115
Reasonable value of biological assets	9		9			9
Total non-current expenditures:	592	0	592	0	0	592
Increase (reduction) in non-restricted net assets						
After non-current categories.	\$15	\$0	\$15	\$0	\$0	\$15

In fact, the primary negative result of core activities for US\$275,000, occurred because the remaining commercial activities are presented separately and are not included with the revenues where they are budgeted. In addition, the Inter-American Institute for Cooperation on Agriculture (IICA) contributed US\$938,100 as a contribution to CATIE, which was key to achieving positive financial health during 2018.

Despite the adjustments due to NIIF 9, and thanks to budgetary control, total income and expenditures showed a positive balance in CATIE's finances with a net result of US\$15,030.

CATIE uses NIIF-based accounting (NIIF is the Spanish acronym for International Financial Reporting Standards) and in 2018 a new NIIF 9 standard (Financial Instruments) was applied, which resulted in a greater deterioration in country quotas pending collection. In this context, CATIE absorbed the amount of US\$678,000; this standard also adjusted the value of CATIE's participation in the Fundatrópicos Trusts and a decrease of US\$70,000 was recorded. On the other hand, the Certificates for milk contribution that CATIE has with the Dos Pinos company had a positive adjustment due their value in the market.

V. Status of member country quotas

During 2018, CATIE achieved a significant recovery of country memberships in the amount of US\$1.2 million, as an outcome of negotiations with the Dominican Republic which canceled all its quotas in arrears (US\$455,338), and whose resources are destined mainly for scholarships. El Salvador also paid six years of quotas in arrears (US\$300,000) and Honduras paid one quota in 2018 and it is expected to make two more payments (US\$100,000) in 2019. The Director General worked with representatives and country liaisons to present a plan to recover quotas from countries that have lagged in their payments such as Bolivia, Paraguay and Belize.

Table 4

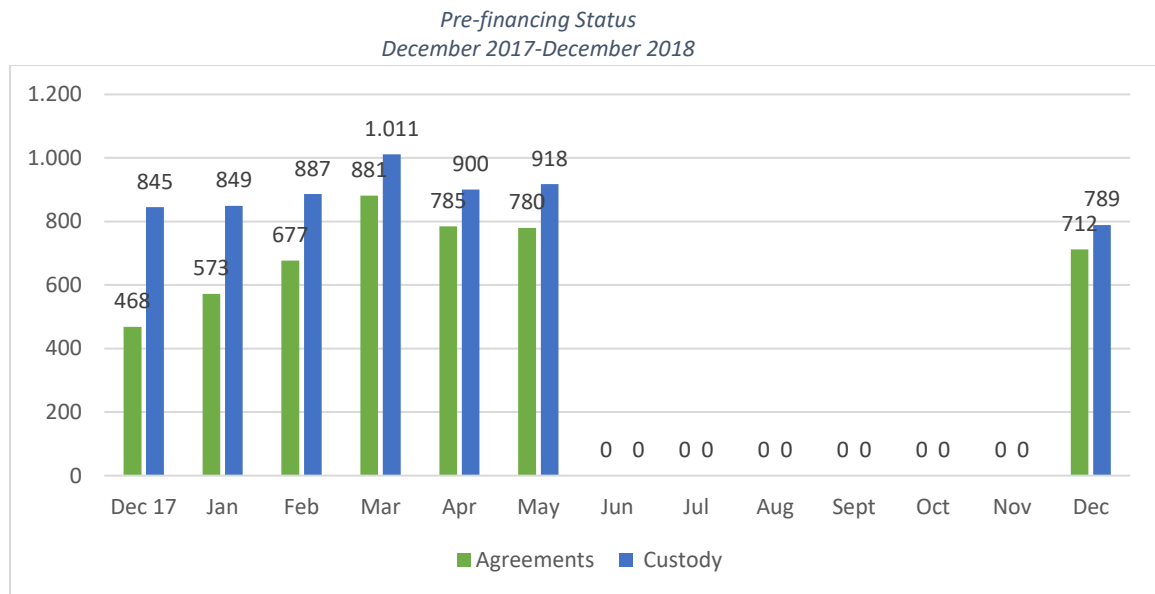
TROPICAL AGRICULTURAL RESEARCH AND HIGHER EDUCATION CENTER
STATUS OF PARTNER COUNTRY QUOTAS
As of December 31, 2018

COUNTRY	Quotas receivable at start of year	Annual quotas	Quotas collected in 2018			Net quotas receivable by year end
			From prior periods	For the current period	Total received	
BELIZE	300 000	50 000		0	0	350 000
BOLIVIA	670 000	50 000		0	0	720 000
COLOMBIA	652 000	0	190 800	0	190 800	461 200
COSTA RICA	0	50 000		50 000	50 000	0
EL SALVADOR	300 000	50 000	300 000	0	300 000	50 000
GUATEMALA	0	50 000		50 000	50 000	0
HONDURAS	300 000	50 000	48 000	0	48 000	302 000
MEXICO	100 000	50 000		0	0	150 000
NICARAGUA	28 000	50 000	14 000	36 000	50 000	28 000
PANAMA	0	50 000		50 000	50 000	0
PARAGUAY	700 000	50 000		0	0	750 000
DOMINICAN REPUBLIC	455 338	50 000	455 338	50 000	505 338	0
VENEZUELA	400 000	50 000		0	0	450 000
TOTAL COUNTRIES	3 905 338	600 000	1 008 138	236 000	1 244 138	3 261 200

V. Status of pre-financing the agreements and custody funds

The graph below shows the behavior of the pre-financing of agreements and custody funds, measuring the degree to which CATIE temporarily pre-finances the restricted portfolio of projects and custody funds, which generates pressure on the Center's liquidity.

Table 5



Funding levels this past 2018 have remained stable; the administration will continue making efforts at the end of the period to evaluate recognition as well as deterioration of part of the overdrafts of funds in custody that show significant time without recovery. Toward this end, CATIE proceeded to absorb US\$73,000 for non-recoverable historical overdraft.